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JOHNSTONE & DUNCKLEE.

Wintering Manure.

There is no part of the economy of the farm which deserves more attention than the preservation and increase of manure, but there are few portions which receive less attention. Yet, without care, without labor, without a strict economy in the manure heap, no farm can be successfully and profitably conducted. In the new and rich untilled lands of the west, whether woodland or prairie, good crops may be, and frequently have continued to be taken off the land, year after year, for long periods, without the least return; but it has been because nature had laid up in the soil for centuries previous to its cultivation by man, accumulated stores of riches, on which the settler might draw, but which in many cases, it was soon found, were far from being exhaustless.

The necessity for the production of manure, and for its care, preservation and application, is becoming more evident every year to those farmers who watch sharply for the profits of their labor, and the increase and the maintenance of their crops.

The season in which the greatest amount of manure is produced is in winter, when the cattle are generally collected together, and are fed in the yards, or in sheds or barns. Some farmers it is true, have never yet got to the length of providing shel-

ter for their stock, and possibly some never will, but they are not the kind who belong to the "go ahead class;" they have chosen to be behind their neighbors, and they will always remain where nobody will care to keep company with them. It is in winter, when the corn-stalks, the oat-straw, the wheat-straw, the chaff, and all the material raised on the farm which is too bulky, and of too little market value to be sold profitably, is converted either into butter, into beef, into mutton, into pork, or into work, by feeding. A great portion of the profits of feeding, however, is entirely lost, owing to the slovenly and careless manner in which the manure is taken care of, and by which a large share of it is completely lost.

On many farms, the only care seems to be the necessity of getting it out of the stable, and it is pitched out of the openings on the farm, where it is allowed to be exposed to the rain and wind, till there is no more virtue left in it than in so much dry sand. In other places it is shovelled out, where every shower of rain leaches it of all its strength. All this want of care, robs the land of what is its due; of course it robs the farmer of his profits. Whoever cheats his land, picks his own pocket.

The chief supply of manure is the farm-yard. Farmers may purchase guano, or gypsum, or phosphates, or artificial manures, and succeed for awhile; but if they neglect the supply that their own stock and consumers furnish to them, they will ultimately fail, and their farm will "run out."

Let us look at the quantity of stuff which the ordinary farmer of a lot of one hundred acres may have in a year, which he can make profitable only by turning into manure. Estimate his production of crops for one year, at the following moderate computation, which all will allow to be within the bounds of probability, viz:

Ten acres of wheat, producing 20 bushels per acre, will give 200 bushels of wheat; that, according to the usual computation of 100 pounds of straw to every bushel of wheat, would give ten tons of wheat-straw to be converted into manure.

Ten acres of oats, producing at the rate of 50 bushels to the acre, and allowing 70 pounds of straw

for every bushel of grain, and we have from this crop, seventeen tons and a half of straw.

Ten acres of corn will easily yield at least a ton and a half of fodder per acre, which will give fifteen tons more.

Ten acres of hay, at the rate of two tons per acre, will give twenty tons, which if not near a city market, cannot be sold at a profit, but must be consumed by stock on the farm.

We will allow the produce of the other 60 acres, which may be occupied for pastures, for wood-lot, for roots, potatoes, buckwheat, orchard, garden, to furnish about twenty tons of other materials, which must either be consumed on the farm, or be allowed to go to waste.

The product of straw will sum up as follows :

Wheat-straw.....	10 tons.
Oat-straw.....	17½ "
Corn-stalks.....	15 "
Hay.....	20 "
Other material.....	20 "

Total.....82½ tons.

Here it will be seen are 82½ tons of material, that ought to be returned to the land in such a shape that it will aid to enrich it. This can only be done by using it as food and as litter for the animals kept on the farm. Suppose the stock on such a farm to consist of three horses, a yoke of working oxen, 6 milk cows, 8 head of young cattle, 50 sheep, and 4 hogs. They have to be wintered or kept in the house from the first of December till the first of June, or six months, which we will call 180 days.

Each horse will consume per day, at least 16 pounds of hay, and 8 quarts of oats, or their equivalent as food, and about ten pounds of straw as litter. Now it is known by actual experiment that a horse of medium size, say of 900 pounds weight, will void about 35 pounds of fresh excrements, including the urine, of which about two-thirds are left in the stable; a horse, on an average, not being out of the stable more than eight hours per day. Each horse, if littered and fed as above stated, will make about 30 pounds of manure per day.

The working-cattle will consume as much straw or hay, but will not get so much grain. They will make, however, full 40 pounds per day each, allowing for litter.

The milk-cattle will consume at least 20 pounds of hay per day, or its equivalent in straw, pumpkins, small potatoes, or slops of some kind, and will make about 40 pounds of manure per day.

The young cattle, according to their size and age, will average 25 pounds each.

Sheep will consume about two pounds of hay each, and will void about 3 pounds of excrements.

Hogs of about 120 pounds weight, will consume in slops and other stuff, 8 or 10 pounds of food per day, and will void about five pounds of manure, besides making as much more from their litter.

It must be remembered that the above figures

include the urine as well as the more solid excrements, but which are together equally valuable. The former, however, for want of proper care, hardly ever proves of much benefit—but few even of our best farmers, taking much pains to save it, by having material prepared to absorb it, by having gutters in their stables or cow-houses, to conduct it where it would prove beneficial.

From the estimate above made, however, it appears that with the animals above given, the following amount of manure is made on the farm during the winter, to supply the place of the 82½ tons of straw that have been taken off it, whether the farmer sees fit to take care of it, or not.

3 Horses.....	16,200 pounds.
2 Oxen.....	14,400 "
6 Milk Cows.....	43,200 "
8 Young Cattle.....	36,000 "
50 Sheep.....	27,000 "
4 Hogs.....	7,200 "
Total.....	144,000 "

Here it will be seen that 74 tons of manure is made on an ordinary farm of 100 acres every year, and which, when on the field, ought to be worth at least two dollars per ton, or a dollar per load. Now, we ask our readers, what labor is ever expended in securing this valuable source of profit, and in adding to its amount?

To reap its full benefit, it wants to be as carefully husbanded as the best crop on the farm; and it deserves, and ought to have as much attention as the finest imported animal that has ever been brought into the State. On another page will be found a letter from Mr. Amos Mead of Plymouth, calling attention to the valuable deposits of muck and marl, all of which may be made to double the quantity, and to increase in a four-fold degree the value of the manure crop made during the winter season.

A difficulty, also, frequently met with in using manure in the spring by farmers who have not the use of many teams, is the short period which some seasons allow for drawing it out to the field where it is wanted to be used. When the field is at some distance from the barn-yard, it will be found a great saving of time at the season when it is most precious, to make the manure heap during the winter season, in the field where it is to be used in the spring. This can easily be done by having the stables and yards regularly cleaned, and the manure taken out on the sled or wagon every day, or every two days, as may be found most convenient. The road may be blocked up occasionally with snow, but that difficulty is easily got rid of, in comparison with trying to haul out the same stuff when the frost is coming out of the ground. We, ourselves, tried this one season, and found that the saving it affected in time and money at a busy season, far more than repaid all it had cost, while it enabled us to have our corn planted in a well-manured lot, at

least ten days before our neighbors, who had relied on getting favorable weather and hard roads to get out their manure when they wanted to use it, and when their teams were required the most for their spring work.

Another hint, we will venture to give relative to the saving of manure, before closing this article; and which we also know by experience to be a good one. It is the making of the beds of animals of cut fodder. Cut straw, will soak up and preserve all the urine as it comes from the animals, while it decomposes easier, makes a more valuable manure, and keeps the animals much cleaner than long straw, which never packs down close enough to soak up and retain the moisture of the animals that stand on it. To be sure it requires work, but since the introduction of horse-power into barns, it is very easy to have a straw-cutter that can be connected with the horse-power; and half a day's work in the week will cut enough fodder and litter to last for the next seven days. The ease and saving in time with which animals are kept clean by the use of cut litter, is astonishing, and after it is once tried, it is preferred by all, especially by those who keep many milk cattle, or stall-fed animals.

Under-draining and Australian and other Wheats.

MR. JOHNSTONE:—You know we read that from the "abundance of the heart the mouth speaketh," and after perusing the two last numbers of your valuable paper (and, by the way, I consider it is not to be beat by any agricultural sheet in the Union, and the only objection I have to it is that it comes only once a month, as I am always waiting for it two weeks in advance), I can scarcely refrain from raising my voice with the many others in saying something upon the all-important theme, agriculture—not that I aspire to notoriety at having my name appear in public print, but the reverse; for it was with great diffidence I communicated through this medium the inquiry relative to a proper mode of under-draining; but finding that article met with some notice, I am quite encouraged to speak again, and here I would say that I feel much obliged to Mr. Redman for the reply he made to it. Yet I still consider the plan I had formed of using good white oak stuff made in the shape of an inverted V, with holes bored in the sides, placed upon a board in the bottom, to be not only as durable as wood in any other shape, but as capable of operating as effectually to drain, and more so even than brush or loose stone, and just as perfectly as tile. And here I would mention that I have this summer found timber embedded three feet beneath the surface in a state of almost perfect preservation. And how long, I would ask, is it probable that such timber has been lying there? I conjecture at least

one hundred and fifty years, and quite as probable, perhaps, fifteen hundred. I regard such land as being a deposit, as well as an accumulation, of decomposed vegetable matter. I suppose, however, the more dry the land becomes by means of draining, the more susceptible will be the timber of decay. Yet I cannot but think that good oak lumber would last twenty years or more. I apprehend that where Mr. Redman experimented with brush boards would be quite expensive, and with me a suitable kind of brush, I think, would be almost unattainable. Thus much again, Mr. Editor, on the subject of draining.

And now a word or two about Australian wheat. When I saw the article from Mr. Tooker in the August number, relative to this variety of wheat, I thought it perfectly agreed with my experience in the same matter, and I felt like saying amen to it; and should not have deemed it necessary to give my testimony in its favor, had not a rebutter appeared in the last number, from Mr. E. C. R. Miller, of Kalamazoo. Now, I do not know how it is, that Mr. Miller has had such bad luck with it, though it may be for the want of adaptation of soil to the plant. I presume it is well known to all agriculturalists, that different varieties of wheat flourish better upon particular varieties of soil, or different situations of the same soil; for instance, the Soule wheat needs a richer soil than the Flint or Blue-stem, or the two last varieties are far less sure upon a rich soil than the first; and the first, perhaps, will yield no more, or not so much upon a weaker soil, as the latter; and again, the old Red-chaff Bald, which is considered by all to yield the best when well filled, will not answer to sow upon old land manured by clover, or otherwise; and especially not upon a soil inclined to be mucky, yet upon new ground, a light clay loam soil and rolling surface, at the present time, many are raising it with great success. Hence, not that there is any difference materially in the elements that forms the berry, yet, the difference in the time of maturing, or tenacity, or growth of the straw, or something else, Mr. Editor, seems to cause different varieties, to require different seeds.

I am a little in the fog, though, about Mr. Miller's success, for I had considered a rich soil adapted to this variety of wheat. I will give, however, a bit of my experience in the same matter. In the fall of 1851, I saw it advertised, as did Mr. Miller. I sent for a half bushel; it was delayed on the way, so that I did not get it, till very late in the fall. I sowed it on the 25th day of November, reserving about two quarts—to retain my seed in case it proved a failure. Well, it did almost prove a failure, in consequence of the very dry hot weather about the first of July, when it was trying to blossom, standing wilted at mid day, as you have no doubt

seen corn during the two dry summers past. The result was—it did not fill, except at one end of the lot, which was a more moist spot of ground; but what I did get, was a fair merchantable berry, resembling very much a spring wheat. Well, last fall, I sowed what I had raised upon an acre of ground, it measuring one and a half bushels; but it was very dirty with straws and weeds cut up with it; and I feared that to clean it, would waste some of the seed, and it was no more than half thick enough, yet it yielded within a trifle of twenty bushels, while the Soule adjoining it, turned out just seventeen bushels; but the ground, as all my neighbors know, was pretty poor, and the Australian was on rather the poorest end. Now the Soule was sown thick enough, while the Australian was not; and the difference in yield was about three bushels. But the Australian, although under the circumstances not yielding very big, I considered showed a nice specimen of wheat, the heads large, and extremely well filled. I counted in one head a hundred berries, and in very many, over eighty, and the berry in size is nearly double that of the seed, and quite as white.

Now, Mr. Editor, I do not wish to be a participant in giving reputation to a thing which is likely to prove a humbug, and my opportunity as yet, has not been sufficient to fairly test its merits; but really, from what I have seen of it so far, I can't help but think it is a remarkable nice kind of wheat, and is capable of yielding some ten bushels more to the acre, than any other wheat among us.

Respectfully yours, L. D. OWEN.

[It is just such testimony as the above, that is valuable on the introduction of new seed.—ED.]

A Plough that ought to be known.

The following communication we find in the *Livingston Courier*. If any of our numerous subscribers in Livingston can give us some information equally authentic, relative to the excellent qualities of what appears to be a valuable improved plough, it will no doubt prove of interest to many readers:

CURTISS' LATEST IMPROVED PLOUGH.

MR. SMITH:—Once more I beg the privilege of calling the attention of Farmers, through your paper, to something that interests them. During this dry weather I have been breaking up a summer fallow with beds of stiff clay and stone in it, that had been scratched over, year after year, ever since the Indians ceased to roam over it; and with all my little strength could not get the plough into the ground deeper than five or six inches; and a new cast point put on in the morning would not enter at all towards evening, after the bevel had been twice clipped off during the day. At last a strip remained, through the middle of the field, that would require two days worrying and at least three new points and be miserably ploughed after all. In this strip I broke three points that had been greatly

strengthened in the casting, in going round it less than four times, and was in a fair way of being compelled to abandon it.

At this time Messrs. Clark & Taylor, who manufacture *Curtiss'* plough at Howell, offered me one of these on trial with a guarantee against its breaking; and your readers may judge of my astonishment and delight, when, with two good yoke of oxen, it walked through my clay and stone beds, twelve inches deep, with as much ease to the oxen and far greater to me than the *Livingston County* plough had done a few minutes before, making the old settlers that had bid defiance to all intruding predecessors, groan dismally, and anon pop up like a chestnut roasting in hot embers. With fear of breaking it, I hitched a third light yoke of oxen between the other two, drove slowly at first, ran unavoidably against some rocks of a ton weight; often took out the plough to see whether it was broken, grew more and more careless; drove on and came to the conclusion that three yoke can't break it by fair usage, and ploughed as much in one day as I could previously do in two; while the same point served to the last as well as at first. In fact if I had had my *Curtiss'* at the commencement, I should have saved more than the cost of the plough, which is only seven dollars, in ploughing fourteen acres, twelve inches deep instead of from five to ten with the old plough; and that in *points* and *time* alone, without any additional team, and with vastly more ease to myself.

"Did you ever!" says the Farmers' lady—"hear such a puff before?" continues her husband. "Schetterly is no doubt well paid for writing it," responds the shrewd son who holds plough. No such thing. Not a cent offered, asked, nor received. It is for your benefit I write; perhaps you have a clover bed yet to turn over, and *Curtiss'* plough only can do it right. You can't puff *Curtiss*, you must use it before you can talk about it. Ask Rogers, Reed, and old Mr. Sharp, who is an old plough tinker, and all of whom have expressed their admiration of my *Curtiss* after holding it. But how, you ask, can it be that it goes twelve inches deep, cuts a furrow fifteen to eighteen inches wide, and turns it completely over, with no more team than a *Livingston County*, *Michigan*, or *North Bend* plough, cuts ten to fourteen inches wide, and then sets the sod on edge if you put it in the ground more than seven or eight inches? A fair question, which receives its answer in the fact that my new *Curtiss* was perfectly scoured in four hours, except a small strip at the top of the mold-board. It pushes no lead weight before it, but brings the ground from the bottom of the furrow and then tumbles over, or sets it fall into the pit, if you put it in more than twelve inches.

Respectfully your
and the Farmers' friend,
H. R. SCHETTERLY.

Source and Production of Wax.

Mr. JOHNSTONE:—In the *Farmer*, p. 301, I see it stated as an observation of Mr. Todd "that the wax is a substance produced in the body of the bee, and exudes from it, and adheres to the outer surface, etc." This is not a new discovery. By consulting Liebig's *Animal Chemistry*, pp. 301 to 306, your readers will find a circumstantial detail of experiments made in Germany by F. W. Gundlach, which proves, incontestably, that bees make wax not only from honey, but also from sugar.

"As soon as the bees have filled their stomach, or what is called the honey bag, with honey, and can not deposit it for want of cells, the honey passes gradually in large quantity into the intestinal canal, where it is digested. The greater part is expelled as excrement; the rest enters the fluids of the bee. In consequence of this great flow of juices, a fatty substance is produced which oozes out on the eight secreting spots, which occur on the four lower scales of the abdominal rings, and soon hardens into laminae of wax. On the other hand, when the bees can deposit their honey, only so much enters the intestinal canal as is necessary for their nourishment. The honey bladder need not be filled with honey longer than forty-eight hours in order to bring to maturity, on the eight spots, eight laminae of wax, so that the latter fall off."

"I made the experiment," says Gundlach, "of giving to bees, which I had enclosed in a box with their queen about the end of September, dissolved sugar candy instead of honey. Out of this food laminae of wax were formed; but these would not separate and fall off readily, so that the mass, which continued to ooze out, remained, in most of the bees, hanging to the upper laminae; and the laminae of wax became as thick as four under ordinary circumstances. The abdominal scales of the bees were, by means of the wax, distinctly raised, so that the waxy laminae projected between them."

"In order to produce wax in the manner described, the bees require no pollen, but only honey. I have placed, even in October, bees in an empty hive, and fed them with honey; they soon formed comb, although the weather was such that they could not leave the hive. I cannot, therefore, believe that pollen furnishes food for the bees, but think they only swallow it in order, by mixing with it honey and water, to prepare liquid food for the grubs. Besides bees often starve in April, when their stock of honey is consumed, and when they can obtain in the fields abundance of pollen, but no honey. When pressed by hunger, they tear the nymphæ out of the cells, and gnaw them in order to support life by the sweet juices they contain.—But, if in this condition they are not artificially fed, or, if the fields do not yield their proper food, they

die in a few days. Now, if the pollen were real nourishment for bees, they ought to be able to support life on it, mixed with water."

"Repeated experiments have convinced me that the bees, as soon as their laminae of wax are mature, return to the hive and remain at rest just as caterpillars do, when about to change. In a swarm that is actively employed in building, we may see thousands of bees hanging idly at the top of the hive.—These are all bees whose laminae of wax are about to separate. When they have fallen off, the activity of the bee revives, and its place is occupied for the same purpose by another." "If to bees engaged in building cells, we give honey in a flat dish, and cover the dish with perforated paper, that the bees may not be entangled in the honey, we shall find, after a day, that the honey has disappeared, and that a large number of laminae of wax are lying on the paper. It would appear as if the bees which have carried off the honey, had let fall the scales of wax; but this is not so. For, if above the paper we lay two small rods, and on these a board overhanging the dish on every side, so that the bees can creep under the board and obtain the honey, we shall find next day the honey gone, but no laminae on the paper, while laminae will be found in abundance on the board above. The bees, therefore, which go for and bring the honey, do not let fall the laminae of wax, but only those bees which remain hanging at the top of the hive." This is no doubt a provision instituted by the Creator to prevent the loss of the wax; for, when the bee feels the sensation of dormancy approaching, it retires to the hive, and the wax falls off where it is needed.

"On the 29th of August, 1841, at a time when the bees could obtain, in this district, no further supply of honey from the fields, I emptied a small hive, placed the bees in a small wooden hive, having first selected the queen bee and shut her up in a box furnished with wires, which I placed in the only door of the hive, so that no embryos could enter the cells. I then placed the hive into a window, that I might be able to watch it. At 6 P. M. I gave the bees 6 oz. of honey run from the closed cells, which had thus the exact consistence of freshly made honey. This had disappeared next morning. In the evening of the 30th I gave the bees 6 oz. more, which, in like manner, was removed by the next morning; but already some laminae of wax were seen lying on the paper with which the honey was covered. On the 31st of August and the 1st of September, the bees had in the evening 10 oz., and on the 3rd of September in the evening 7 oz.; in all, therefore, 1 lb 13 oz. of honey, which had run cold out of cells which the bees had already closed. On the 5th September I stupified the bees by means of puff-ball, and counted them. Their number was 2,765, and they weighed 10 oz. I next weighed the

hive, the combs of which were well filled with honey, but the cells not yet closed; noted the weight, and then allowed the honey to be carried off by a strong swarm of bees. I now weighed it a second time, and found it 12 oz. lighter; consequently the bees still had in the hive 12 oz. of the 29 oz. of honey given to them. I next extracted the combs, and found that their weight was $\frac{1}{2}$ of an ounce. I then placed the bees in another box provided with empty combs, and fed them with the same honey as before. In the first few days they lost rather more than one oz. in weight, and afterwards half an ounce daily, which was owing to the circumstance that, from the digestion of so much honey, their intestinal canal was loaded with excrements; for 1,170 bees, in autumn, when they have been but a short time confined to the hive, weigh 4 oz.; consequently 2,765 bees should weigh 9 oz.; but they actually weighed 10 oz., and therefore had within them 1 oz. of excrement, for their honey bladders were empty. During the night the weight of the box did not diminish at all, because the small quantity of honey the bees had deposited in the cells, having already the proper consistence, could not lose weight by evaporation, and because the bees could not then get rid of their excrement. For this reason the loss of weight occurred always during the day."

"If then the bees, in seven days, required $3\frac{1}{2}$ oz. of honey to support and nourish their bodies, they must have consumed $13\frac{1}{2}$ oz. of honey in forming $\frac{1}{2}$ of an ounce of wax; and consequently to form 1 lb of wax, 20 lbs. of honey are required. This is the reason why the strongest swarms in the best honey seasons, when other hives that have no occasion to build, often gain in one day 3 or 4 lbs. in weight, hardly become heavier, although their activity is boundless. All that they gain is expended in making wax. This is a hint for those who keep bees to limit the building of comb. Cnauf has already recommended this, although he was not acquainted with the true relations of the subject.—From 1 oz. of wax bees can build cells enough to contain 1 lb of honey. One hundred laminae of wax weigh 0.024 gramme (rather more than $\frac{1}{4}$ of a grain) consequently one kilogramme (15.360 grains) will contain 4,166,666 laminae. Hence $\frac{1}{2}$ of an ounce will contain 81,367 laminae. Now this quantity was produced by 2,765 bees in six days; so that the bee requires for the formation of its eight laminae (one crop) about thirty-eight hours."

Every chemist is acquainted with the fact that the essential elements of starch, wax, resins, all kinds of oil and fat, all vegetable acids, sugar, honey, and some other compounds, are the same, i. e. carbon, hydrogen, and oxygen, which, when isolated from each other, exist in the form of gas or air.—Hence, the organisms of both plants and animals, though neither of them can produce elements, can

and do change these compounds into each other by simply changing the relative proportions of their elements, or, in some cases, by merely changing the electrical conditions of the elements or compounds without any change of their proportions. Thus:—the composition of cane sugar, according to Liebig, is 12 equivalents of carbon, 11 of hydrogen, and 11 of oxygen, or 12 equivalents of carbon and 11 of water; for an equal number of hydrogen and oxygen form water, when combined chemically. Again, the composition of bees' wax is 20 equivalents of carbon, 20 of hydrogen, and one equivalent of oxygen. To metamorphose sugar into wax, therefore, requires only a change in the relative proportion of the elements of one or other, or of both these compounds; and those elements which are set free, enter into combination with other elements, and thus form new compounds; or, being eliminated into the atmosphere, (as is the carbon contained in seeds in the process of malting, and germination of seeds) converted into carbonic acid by combining with oxygen, and leaving the remaining elements in the proportion to form sugar, which, by another chemical process, termed fermentation, is changed into alcohol, during which more carbon and oxygen are thrown off in the form of carbonic acid. But, there are a number of compounds which are composed of precisely the same proportions of elementary atoms: Thus:—Gum and cane sugar both consist of 12 equivalents of carbon, 11 of hydrogen, and 11 of oxygen, as above; and there are some isomeric and polymeric compounds, which differ still more in their physical and sensible properties, and yet their elementary constitution is entirely identical; and as Prof. Faraday has shown that electricity is identical with chemical affinity, and gives bodies their properties, it is evident that these compounds owe their varying qualities to a diversified electrical endowment.

The metamorphoses of compounds into each other, above alluded to, are exceedingly numerous, both in vegetable and animal organisms:—vegetables deposit starch in their substance, especially in and around their buds, in autumn; and next spring the starch is converted, by many vegetables, into sugar; this sugar, combined with nitrogen and some salts and iron absorbed from the earth by the roots, is changed into dextrine or nutritious sap by the agency of solar electricity; and from this sap are then manufactured, by the same agency, all the compounds that enter into the structure of vegetable productions; while the three elements which constitute the oils, starch, and resins deposited in the wood, bark, leaves, roots, fruits, etc., as the case may be, and which also constitute the acids, principally found in the fruit, are again separated from the elements that constitute the sap, and combined into these tertiary compounds, still by the same

agency. The evidence that the agent which procures these marvellous chemical changes in vegetables, is electricity and emanates from the sun, can not be recapitulated here for want of room.

HOWELL, Mich.

H. R. SCHETTERLY.

Slovenly Farming.

MR. JOHNSTONE:—I wish to say a few words about the farms in Michigan. Many, very many of them are in a sad predicament; the fences being down, the boards off the barn, (if they can boast of such an appendage), the manure lying about the yard, and the whole presenting an appearance unworthy of our fertile and beautiful State. We have, however, some good farms, like oases in the desert, showing the intelligence and enterprise of their occupants. But why is it that so many of our farms are in a bad condition? Is it because the soil is wanting in natural fertility, or because the products of the farm do not bring a fair remuneration? No, it is neither; but a reckless and negligent system of cultivation, or rather no system at all. It is useless to try to plow with a dull plow, and a team that will not make a shadow when the sun shines, and many such are to be seen in this State, especially in the spring.

Now I would say to the occupants of these wretched-looking farms, reform immediately. Get up in the morning and bestir yourselves during the long winter which is at hand. Prepare your firewood for the coming summer; lay up those fences and build new ones if necessary; take good care of your stock, and early next spring get out the manure that has been lying in your barn-yard for the last ten years. Grub out your fields and pick up the stones that you may plow deep and well, and you will not regret your reformation.

HOMER, Calhoun Co., November, 1853.

OBSERVER.

[Certainly, let us hear from you again. There are few subjects that call for more attention just now, than the one to which you have referred. A word or two from shrewd "Observers" now and then, may set these slovenly farmers thinking; they can see better how they appear when shown up in print.—Ed.]

Large Potatoes.

MR. EDITOR:—I have taken the liberty to send you a sample of several varieties of potatoes grown the present year, and which were managed in the following manner:

About the middle of June, I plowed a little square of about 75 rods of ground, where a small flock of sheep had been fed through the winter. Whatever portions of it they had not manured to suit me, I covered from the stables. I then put the plow in as deep as it would go, and afterwards planted the lot in hills, three and a half feet apart each way.

Whenever the weeds and grass began to show themselves, I passed a good cultivator through the rows each way twice, and afterward at the time I thought most suitable, passed through between the rows, both ways, a shovel plow. I then hoed them perfectly, pulling out all the weeds from the hills with my hands. The result has been that from this plot, I have one hundred and eighty bushels of potatoes, of which I send you fair samples in the accompanying box; asking at the same time, those who can do better to let the readers of the *Farmer* hear of it, and to tell their story shorter, if they can.

Very respectfully yours, JOHN GARVIN.

WASHINGTON, Macomb Co., Oct. 31, 1853.

[The potatoes were received, and if they are samples of what can be done with care, we should think such a crop on a large scale would pay well. There were four varieties, to wit: *The Peach Blossom*, the *Flesh color*, the long *Pinkeye* and the round *Pink-eye*. In giving the measurement of the ground, however, Mr. Garvin might have been a little more particular, by giving the length and breadth in yards or feet.]

Muck and Marl.

EDITORS MICH. FARMER—SIRS:—I wish to say a few words to my brother farmers about muck and marl. There is in each acre of marl three feet deep, full 2,050 cords of muck and marl, or of muck alone which will contain $2\frac{1}{2}$ cart loads to each cord, or 5,125 loads to the acre, which in value as manure is fully equal to two thirds the same quantity of barn-yard manure; and every practical farmer must know that every load of good manure is at least worth one dollar each, when hauled into the field, ready to be applied to the crop. One would hardly think that a farmer possessing such a fund of wealth would be willing to let it lie dormant and unproductive when it is so easily turned to profit. But such is the fact; thousands upon thousands, and I might say millions upon millions of cords now lie in their native beds, waiting the action of a more provident generation. The time will come when necessity will compel the tillers and owners of the soil to avail themselves of this generous provision of nature. I well remember when it was the practice to some extent in the rich districts of New York, to cart their manure and throw it into the street. Such was the practice in the town of Burlington, Otsego Co., and on the German flats, some 50 or sixty years ago: dung was thought to be injurious to the crop upon those rich lands; experience has shown the fallacy of that opinion. Our marshes and beds of marl are at this time inviting their owners to use their prerogatives in reclaiming them for the purpose of enriching themselves. How long will they turn a deaf ear to an invitation so reasonable. Marshes may be drained and brought

into use, and at the same time the adjacent uplands enriched to any desirable extent. By the term marl, I mean a sort of lime deposit generally underlying the muck of our marshes, a sort of filtration of lime if I may so call it. When will the lords of the soil learn that "an ounce of prevention is worth a pound of cure;" or in other words that it is easier to keep good land in a state of fertility, than to resuscitate it after it has been exhausted? What would be said of a farmer at the present day who should remove his barns to get rid of the accumulation of the manure? Would it be less inconsistent with good husbandry than leaving his marshes undrained and his uplands unenriched? I am well satisfied that there is no crop raised upon our dry uplands but would be greatly benefitted by a generous application of the contents of our marshes; especially do I think that fruit trees of every kind would be stimulated to a vigorous growth, and their bearing capacities greatly increased. In fact, too much cannot be said in favor of a liberal use of this excellent fertilizer. I am of the opinion that if a suitable quantity of muck should be placed in the barn-yard in the fall or winter, say twice or three times the quantity of stable dung, made at the establishment, it would after being properly mixed before applied to the crop, be equal, load for load, to stable manure as generally saved—but at any rate don't forget the *muck and marl*. Yours,

AMOS MEAD.

MEAD'S MILLS, Wayne Co., Nov. 15, 1853.

[Shall we not hear from this correspondent again? He is right on every point. It is not many years since the livery stable men of a city in the State he refers to above, had to cart their manure down to the bank of the Hudson, and throw it into the water to get rid of it. Now the same establishments get four to six shillings per load for the privilege of taking it away. When the manure was thrown in the river, the farmers in the vicinity raised their own wheat, *now* most of the flour used in their families is purchased and made from grain raised in the west.]

A Hint on Selling Stock.

Most of our farmers, if they have a fine thrifty heifer, that shows at an early age a readiness to fatten, or that increases in size and weight faster than its companions, which are raised with the same care, or with the same food, make it a point to mark it as the first for sale to the butcher or drover. With pigs it is the same. If there happen to be one or two pigs in a litter, that show signs of outstripping the others in the same brood, they are frequently better fed, and better taken care of that they may be ready for the pork barrel at an early day. With sheep also it is the same. Lambs that are thrifty, show by their growth that they

have a good constitution, increase in size rapidly, and would pay well to be kept as the stock from which to increase the flock, are sold to the butcher or the driver, when he comes along, because they are worth a shilling or two more per head than the weakly, consumptive things which it ought to be the interest of the farmer to get rid of as soon as possible, and at a sacrifice of the shilling or two. Is this not so? And if it is so, does it not strike every reflecting man who raises stock for market, that if the animal is worth so much more to a stranger, it must be worth just as much more to himself for the purpose of raising more of the same sort from, and to get all his stock equal to it in quality. When the buyer comes along to the farmer's house, with the inquiry if the latter has any animals that he wants to part with, it is frequently answered, by taking the former out and showing him all the stock on the farm, and allowing him to select what he pleases. In this case, the buyer never selects the worst animals. He would be considered a great fool if he did; but his experience and practice at the first glance detects which are the finest animals, and are worth the most money. He determines that he must have them, or none, and rather than allow him to go away without making a trade; his terms are complied with for the sake of a small advance in price, and the very animal which would have proved of the most value, and which ought to have been retained for the purpose of breeding from, is parted with; while the animals slow in growth, weakly of constitution, coarse in limb, and hard to rear, are kept, and more of the same sort are bred from them, the next year. The farmer will then turn round and say, because his stock may not be thrifty, that he has had bad luck with his cattle, or his hogs, or sheep, as it may happen; instead of putting the blame where it belongs, and that is on his own want of foresight, in parting with the animals with which we would have had "good luck;" and whose thrifty nature, good constitution and rapid growing propensities would have been transmitted to their progeny. No prudent or good farmer that looks to his interests, with an eye to the future, will allow the butcher or the drover to carry off his choicest animals.

LARGE OAT CROP.—The account of an Illinois farmer having raised 91 bushels of oats on an acre having been published, the *La Crosse Democrat*, a newspaper published in Wisconsin, states that it has received the record of two crops of oats, which is far ahead of the Illinois crop. They are as follows:—Mr. D. M. West, of La Crosse valley, raised 111 bu. 18 lbs. to the acre, and Mr. G. F. Pettit, of Sparta, raised 115 bu. to the acre. The latter had 45 acres of the same sort!

Rambles.—No. 4.

BY A. B. NOBLE.

We were informed by William S. Saunders, of Ann Arbor, that last spring he purchased a package of

PRINCE ALBERT PEAS,

which he planted the 25th of April. In twelve days they were in blossom, and in twenty eight days from the time of planting he picked a mess of green peas. The Prince Albert is an early pea and worthy of more general cultivation when an early pea is wanted. With proper care three successive crops may be raised in a season.

Gordon Backus of Unadilla, gave us a statement of the

PROFITS OF A SMALL LOT OF SHEEP.

He had thirty nine for which he was offered only one hundred dollars. He refused that sum but his neighbors thought he missed a good bargain. His clip of wool he sold for \$64.75, and twenty-nine lambs at six months old he sold for \$30, making in the aggregate \$94.75, and has all of the old ones and one lamb left. His flock is a grade about half French and half native, with a trace of Southdown. Raising sheep at that rate is certainly a good business and is quite a stimulus to sheep husbandry.

We were at Howell a few days since, the Capital of Livingston county, and were much pleased with its business-like appearance. The public buildings are centrally located, the private dwellings are tasteful and neat, an unerring indication of thrift. We visited the foundry of Stephen Clark, who is engaged in the manufacture of plows, stoves, and other *fixins*, intending soon to increase his business. His efforts to provide the needful will be appreciated and receive a liberal patronage.

THE LIVINGSTON COURIER,

a spirited sheet, is published at this place. It has a good and increasing circulation which it so justly deserves. In the neighborhood of Howell are many highly cultivated farms, all showing systematic and thorough cultivation. On the plank road east of Howell, we called at the residence of W. A. Buckland, the proprietor of a large farm. We were invited to visit his grapery, and much to our satisfaction found some seven or eight varieties of hardy grapes in full bearing, furnishing an abundant supply of delicious fruit, and we think if many farmers would visit Judge Buckland's grapery, and should their *tasters* be in tune, they would go home fully resolved to pay more attention to the

CULTIVATION OF THE GRAPE.

A vine may be raised as easily as a currant shrub, and supply a desirable article for the family. On our way east from Howell we noticed many good farms showing skill in cultivation, having the appearance of industry and thrift.

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At Brighton we called on an old friend, S. K. Jones, who is dealing in dry goods, groceries, drugs and medicines, and can furnish his customers any thing in his line, from

A CAMBRIC NEEDLE TO A CROWBAR, or from a bottle of Fosgate's anodyne to one of Townsend's Sarsaparilla. He is a large produce dealer and has already begun to act quite efficiently for the *Farmer*, as his list of subscribers already sent in testify, and the *Farmer* may as well be ready, for Jones will not stop short of one hundred subscribers. Success to him!

Pursuing our way homeward from Brighton, we passed over what is very properly called the plains, an extensive and excellent tract of

FARMING LAND,

highly cultivated, in the town of Green Oak. Stopping at a good dwelling, we presented to the proprietor the *Farmer*, at the same time soliciting his subscription, to which he replied, "I take it now, and

WE ALL TAKE IT ON THE PLAINS."

We believe him, for such extensive and well cultivated farms can only be the result of the efforts of minds well stored with agricultural knowledge, with energy to bring such information to bear upon the soil, the products of which amply compensate for every exertion made to bring forth its treasures.

J. G. Crombie of Pontiac, called our attention to a Suffolk boar (which he exhibited at the State Fair) of two years old, estimated to weigh three hundred pounds. He is a long-bodied, short-legged, small-boned animal. Mr. C. says that the Suffolk hogs possess fattening qualities superior to any other breed. He sold his last pig to a gentleman from Ohio at a fair price. We do not profess to be well posted up in the pig business, but the Suffolk gentry really have the appearance of being all that Mr. C. claims for them.

During a conversation with C. A. Craig, of Columbia, Jackson Co., he stated that he had practical evidence of the fact, that to

PREVENT SCANTLING FROM SPRINGING,

all that was necessary, is to place the log to be sawed in the mill, in the position that the side of the log that grew either east or west, should be either up or down, and the scantling sawed in that way never would spring. He assigns as a reason, that by examining a tree after being cut down, the grains will show that the south side of all trees grow faster than the north side. The above applies to boards or very small scantling. It is worthy of being thoroughly tested.

We stopped a short time to view the farm of John Miller, of Plymouth; consisting of two hundred and eighty acres of superior soil, a part of which is heavy timbered land. His farm commands a fine view of the thriving village of Plymouth. Mr. Miller has been a resident of Plymouth about twenty eight years; cleared up his farm, and is now enjoying

its benefits. His wheat crop has varied from fifteen to thirty bushels to the acre, but he thinks the average will not exceed twenty bushels, and is of opinion his wheat is generally as good as his neighbors. He plows deep; tills his land well; and has good crops. His orchard is large, and of choice fruit. His flock of Leicester sheep are fine specimens of their kind, and appear to be well designed for large carcasses, possessing good fattening qualities. He has been offered three dollars per head for his flock, which he no doubt did wisely to refuse. His clip of wool averages five pounds per head. His large, well formed buck weighs two hundred and forty-eight pounds, and is a noble fellow. Mr. Miller's farm has the appearance of being well tilled; his lots of suitable size; barn and out buildings good, and the whole showing off quite well from the village.

Plymouth is a thriving little village of considerable trade, good farming lands surrounding it. There are two plank roads from this place leading to Detroit, and one to Northville.

We called at the residence of Linus Cone, of Troy, Oakland county, and found him as we do many others, busily engaged securing a fair crop of corn. Mr. Cone's farm gives unmistakable evidence of being well managed. His orchard, fruit-yard and shrubbery shows that he values such articles, and therefore cares for them. His garden is in a high state of cultivation, growing vegetables of a large size. The grape vines show themselves quite conspicuous, as well as his raspberries and many other small fruits. His garden is thoroughly underdrained, made rich and spaded deep: his dwelling is in good modern style; his barn and other buildings are in good taste and all systematically arranged, combining a convenience and durability rarely to be seen. His flock of merinoes appear to be in good condition, consisting of about one hundred and seventy. Mr. Cone keeps his sheep in close quarters during the winter, having the stable well littered and always dry. He has lost only one sheep in four years, which proves that he understands sheep husbandry, or has been more fortunate than many others. His farm and buildings all appear to be well taken care of; they are situated on an elevated piece of land, on the declivities of which are to be found superb specimens of conglomerate boulders, weighing several hundred pounds, of different kinds. We secured a piece from one of much beauty.

ST. CLAIR.

St. Clair village is pleasantly located on the St. Clair river, about 40 miles above Detroit. The streets are regularly laid out; the main street runs parallel to the river; the town shows itself to good advantage; is a place of considerable trade from the river and from the counties of Macomb and Lapeer. St. Clair is also tapping Macomb county by a plank road which is now being made from St.

Clair to Romeo. This road will draw a large trade from Macomb, which is a rich county and has a large surplus of produce.

The farming lands in the vicinity of St. Clair are now being settled by an enterprising population, which will add much to the growth of the place. There are now in successful operation, five steam saw mills, one foundry and engine shop, one boiler factory, one steam flouring mill, one woolen factory, two steam tanneries, and a steam ferry boat plies across the river to more on the Canada side.

The iron and brass foundry of J. E. Kelton is an extensive establishment, at which is manufactured steam engines and boilers, mill and steam-boat machinery, siding and planing machines, lath mills and various kinds of agricultural implements of the most approved patterns. Such an establishment will no doubt continue to receive an increasing patronage, and add much to the business of the place.

The various mechanics are doing their part to add to the life and business of St. Clair. No place can thrive without enterprising mechanics; they are an indispensable class of citizens, on whom we are dependent for a large share of our articles of necessity, convenience and luxury.

The *Observer* and *Herald*, two papers of respectable size and appearance are published here, ably conducted, having a good patronage by circulation, advertising and job-printing.

Mine host, J. B. Brown, the well known proprietor of Brown's Hotel, is catering for the public good. His house is large and commodious; the servants kind and attentive; the table furnished with all the necessities and luxuries the market affords. All the "fixins" are found in and about the house necessary to render it a quiet and peaceable place of resort to the traveller for pleasure or business.

Mr. Brown took us up to his farm of two hundred and forty acres, situated about a mile from the village. The farm is well situated, comparatively new, but Mr. B. has taken hold of it with a zeal rarely equaled, to make it a model farm, which his energy and means are sufficient to accomplish. As fast as he clears his land he fences it off into eight acre lots, with substantial board fences. The soil of the farm is part sandy loam, and a part muck or vegetable mould, very rich, and produces abundant crops. On one part of his farm, a few years since, there was a fish pond of about five acres, where he has frequently caught fish. By digging a deep ditch he has drained the pond and sown the same to wheat which now looks very promising. Last season he cut a good crop of grass from it. The soil is black muck from twelve inches to two feet deep; underneath is a blue-clay hard pan. Mr. Brown has imported from the State of New York, the material part of a stump machine, which he is

using to good advantage, to raise stumps of the largest pines. The ground part of the machine consists of two pieces of timber about ten inches square and twelve feet long, framed together in the form of the letter A. On this frame rise three large posts about twelve feet long, one from each corner of the frame; the tops coming together in the centre, over the centre of the frame. Down through this centre is suspended attached to a block, a large wood screw, similar to a common cider mill screw, in a perpendicular position. On the upper end goes out a lever bending downward, to which is attached the power, either horses or oxen. The machine is placed over a stump, the earth is removed from a large root and a huge chain put around its upper end, fastened to the knob at the lower end of the screw in such a position that the claw winds around the knob of the screw; the team put in motion, and the stump is soon taken from its resting place. This appears to be an effectual way to get rid of stumps, and we hope to see more such machines in use.

Mr. B. intends to clear the stumps from all his fields, and to make his farm one of the best in St. Clair county, which he will accomplish if he continues to operate as effectually, as he has already.

Mr. Brown has some half blood Durham stock, very fine specimens of their age. He has commenced building a series of barns and sheds which he will erect as fast as needed. He now has a good young orchard of the various kinds of choice fruit trees, which already begin to bear. He also raises his vegetables for the supply of his public house, and his hay and most of his grain for his stables. Mr. Brown is one of the men who always make everything go ahead that they undertake. He will act as agent for the *Farmer* for the village of St. Clair and vicinity, and we expect a very large accession to our list of subscribers from St. Clair County.

PORT HURON.

Port Huron is a pleasant village situated on the St. Clair River, about one mile from the foot of Lake Huron. The town is handsomely laid out on both sides of the Black River, which enters the St. Clair river at this place. This is the terminus of the Fort Gratiot turnpike, leading from Detroit to Fort Gratiot. The Fort is about half a mile above the village, and about midway between the village and the lake, on an elevated spot commanding the river, on the opposite side of which is Port Sarnia, a village of considerable trade. Port Huron is a port of entry, having its Custom House, with its officials necessary for collecting the duties on imports from the Canada side. The land around the village is a sandy soil, easily tilled. The farming lands along the St. Clair River have been cultivated for some years. The farmers are now settling westward of

the town upon either side of Black River, and the lands are fast yielding to the claims of the cultivator, and producing good crops of grain and hay. In former years more attention has been paid to the lumber business than to farming; but as soon as the lands were stripped of their pine lumber, they have been brought under a good state of cultivation.

The village of Port Huron has already become a place of considerable trade, and increasing wealth and importance. It has five steam saw-mills, a foundry and machine shop, two steam tanneries, a planing machine, and there is now being erected a sash, door and blind factory. This place is now tapping Lapeer county by a plank road to Lapeer village, seven miles of which are already laid with plank, and the work rapidly progressing. When this road is completed Port Huron will draw considerable trade from Lapeer and Genesee counties, receiving their surplus produce; and these counties in return can receive their merchandise by way of the St. Clair river and Port Huron.

A good town house has just been erected for the transaction of town business; a building which every town ought to have. The people have lately erected an engine house, in a part of which is a lock-up which will prove a terror to evil doers if they have any. This town does an immense lumber business. Logs are rafted down Black river and down the Lake, from a large pine tract lying upon Black river, and on the westerly side of Lake Huron.

The Grand Trunk railway will soon be built to Port Sarnia, opposite this village, and the citizens of the town are already beginning to feel its importance, as the rise of village property alone shows. Whether this railway stops here, or is extended to Detroit or west to Lake Michigan, it will be an important work for the place, and Port Huron must be a town of great importance. The river trade, the lumber business and the railroad combined, will cause a growth of the town which will soon entitle it to the cognomen of city.

At the fort are usually stationed a company of soldiers, who live upon and spend Uncle Sam's money much to the benefit of the town. The scenery around the Fort and north part of the village is quite picturesque and inviting, having beautiful groves of pines along the bank of the river, and extending back half a mile or more.

A Mr. Geale, residing on the Fort Gratiot road about five miles from Port Huron, a few years since commenced boring an artesian well. At the depth of one hundred and fifteen feet, through a hard clay, he struck a vein from which arose a strong current of gas, making a noise in its discharge like the blowing off of steam from an engine; the noise of which was distinctly heard for two miles. This noise died away as the gas escaped. To the gas that

arose from the well Mr. Geele attached an apparatus and collected it, conveying it to his bar-room, and by a furnace made for the purpose, he burnt it to warm the room and light the house, accomplishing both objects. After a few months the strong current of gas was stopped by the hole becoming filled with pieces of clay and small stones: this was cleaned out again, and another rush of gas was permitted to escape with a loud noise. After a short time this again filled 'up the hole, which remains now nearly closed.

The route from Pontiac, northward to Lapeer county, passes through the towns of Orion, Oxford, and Matemora. The lands in some places are considerably broken, yet there are many good farms scattered along the entire route. Oxford, in its general appearance, shows to the best advantage; many well cultivated farms are to be seen in the distance, with good dwellings, barns and out-houses, with orchards, some of which, already produce considerable fruit.

Attention is paid in some neighborhoods to adorning the dooryards and gardens with a variety of ornamental trees and shrubbery. The soil is variable, consisting of sandyclay, loam, gravel and mucky soils; some farms possessing all the various soils. A few lots are quite stony; in quantities sufficient for fences and cobble-dwellings. As we begin to near Lapeer village, there are many lofty pine-trees rearing their heads high above the sturdy oak and other trees; the pines show themselves to good advantage amongst their fellows. There is something about the pine, which we always admire; it reminds us of our younger days, when we were in the habit of rambling among them, there sporting many an hour with our playmates.

LAPEER VILLAGE.

The village of Lapeer, the capital of Lapeer county, is situated thirty-two miles north of Pontiac, twenty miles east of Flint, and forty-five miles west of Port Huron, with a population of about twelve hundred. The Court House is a spacious building, making an elegant appearance. They claim that it is the best Court House in the State; and it is very creditable to the citizens of Lapeer. The county offices are on the first floor, and also, the Post-Office. Within, and near the village, are three flouring mills, five saw mills, three tanneries, one foundry, two churches, three public-houses, and select schools. The principal business street is about a third of a mile long, not very compactly built; it is a place of considerable business; a large lumber business is done here; the village is located on the border of a large tract of heavy pine timbered land, which gives rise to an immense trade in lumber. A printing-office, (a necessary appendage to every village), from which emanates the *Lapeer*

County Democrat, is located here. It is a spirited sheet, and worthy of patronage. The village is situated on the westerly side of the Flint river, at the junction of Farmer creek, a stream possessing considerable water-power. This will be the terminus of the Port Huron and Lapeer plank road, which is now being made, and also the terminus of the Pontiac plank road. These plank roads will furnish an easy transit for the large quantities of lumber now made, and the surplus products of the rich farming lands, of which this county can boast of an equal proportion to almost any county in the State. There are many good farms in a high state of cultivation, and the newer portions of the county are being settled by enterprising citizens, who are the class to produce a large portion of the wealth of any country. This place will be on the line of the Grand Trunk railway, now being made through Canada to Sarnia, opposite Port Huron, and through this county, thence westerly to Lake Michigan. Lapeer will eventually be a good farming district, possessing a large amount of very excellent land, which will soon be brought into cultivation, which, with its fine forest, will make it a rich and populous county.

ALMONT.

The village of Almont, situated in the town of Almont, in the south-east corner of Lapeer county, is a village of bustle and business; the two principal business streets are at right angles. Some fine dwellings are erected, and many now in process of erection. Mechanics are just settling in the village, and there is considerable trade, and it is rapidly improving.

We visited the foundry and machine shop of Messrs. Muzzy & Currier, who are an enterprising firm, doing an extensive business; manufacturing many kinds of agricultural implements and mill machinery. They are now preparing to enlarge their establishment considerably, and erect a sash, blind and door factory. This village is now connected with Detroit, by a plank road, by way of Romeo to Mount Clemens, which opens an outlet for the surplus produce, and the large quantities of lumber, made only three or four miles north of the village, where the pine lands of Lapeer commence. The plank road extends north to the mills. The lumber business, and the rich farming lands lying around the town, must make a large place of Almont. Here is situated the celebrated Potato Starch Manufactory, the only one, we believe, in Michigan. The establishment is quite extensive, but owing to the potato disease, they were compelled to suspend operations. We are informed they now intend to commence again, another season, and when in operation, they consume many thousand bushels of potatoes, and make many tons of starch.

ROMEO.

The village of Romeo, (an incorporated village, lying in the towns of Bruce and Washington, the town line about equally dividing the village), is a thriving place, and now does a large business, and perhaps is not exceeded by any town as much inland as this is. It is connected by plank road with Detroit, by way of Mount Clemens; by another with Ashly, on Lake St. Clair; and yet another is building to St. Clair, on the St. Clair river; and also another to Utica, which will connect with the Detroit road, now in contemplation from Utica to Detroit. Romeo will be the terminus of some five or six plank roads. There is, perhaps, not in Michigan, five towns lying contiguous to each other, containing more rich and fertile lands, and so well settled and cultivated as the towns of Bruce, Washington, Armada and Shelby. Romeo is the centre of business for those towns, and Macomb county may well feel proud of her farming lands, settled as they are, by an enterprising and wealthy set of inhabitants. The village is pleasantly located, and contains many fine residences, all evincing a taste not always equalled. Nearly central in the town is built a large and commodious building called Romeo Hall. The lower story is finished for stores. The second floor for offices, and the upper, a third floor, is finished off for a large hall, for holding public lectures, concerts, and other public meetings. The building does credit to the place, and adds to its fine appearance. With such a wealthy farming county around, it must, and always will be a place of business.

While at Romeo, we visited the residence and farm of A. Dickinson, Esq., whose house is built in good modern style. His farm is not large, yet it exhibits a high state of cultivation. He cuts about seventy tons of hay, of superior quality, having a large flock of sheep, of the French and Spanish Merinos, and a mixture of the two. The pet of the flock is a large well-formed imported French buck, whose stock is every way good; and of all the fixtures for keeping sheep and cattle, and horses, which we have seen, including barns, sheds and yards, containing the hay-racks, feeding-boxes, salt and water troughs, not one compares with Mr. Dickinson's for economy and convenience. He must have the bump of order strongly developed, for he has a place for everything, and everything in its place. His garden and yard are well filled with fruit and shrubbery of choice kinds, exhibiting a taste rarely equalled.

There are many other farms adjoining the village, worthy of notice, among which, is Dr. A. E. Leetes, which we had not time to visit.

VILLAGE OF UTICA.

The village of Utica, in the town of Shelby, is improving. It is situated in a rich tract of farming

land, and well-settled and well-cultivated. A plank road is about being made from Utica to Detroit, which, when completed, will open a direct trade with Detroit.

On the way from Utica, Macomb county, we took what is called the canal road to Mount Clemens. This canal was partially completed in the days of former years when the State was making internal improvements in several places. The canal has been abandoned, and a plank road will take its place. While travelling, or rather working our passage on the tow-path we were much amused by a concert of vocal music, from a company of black-birds that had congregated in thousands upon the branches of some very high trees in the vicinity of the canal. They were pouring forth their music in loud strains, with all sorts of chords, concords and discords; although a perfect jargon, yet it was very harmonious and amusing, all seemed bent upon touching the highest key. It was truly a vocal concert in earnest, and far preferable to many that are travelling the country as mere catch-penny concerns. We were so much elated by the music that nine miles of a dense forest was passed almost unconsciously, and we were soon gratified by a view of the village of Mount Clemens, the county seat for Macomb county.

MOUNT CLEMENS.

The town is quite pleasantly located, and doing considerable business. The Macomb Gazette is published at this place; a paper of good size, and edited with much ability by A. C. Smith, Esq., who is also post master. The town is situated on the Clinton River, navigable for some of the smaller lake vessels and steamboats, and about five miles from the Detroit River; a steamboat runs daily between this place and Detroit. Mount Clemens is connected to by a good plank road, which is extended westward to Romeo, and thence northward to Almont, in Lapeer county. This road taps Macomb and Lapeer counties quite effectually, and the farmers have access to Mount Clemens and Detroit for all their surplus produce, which is not a small item.

In the vicinity of Mount Clemens is the nursery of J. J. Traver, who, we were informed by himself, has a good assortment of fruit trees of choice varieties and of thrifty growth, and can furnish the citizens of Macomb, Lapeer and other places with trees on fair terms. He has also attached to his nursery a green house, in which he cultivates green house plants of choice kinds.

On our route north from Mount Clemens we passed the residence of J. O. Ferris. He has a good farm, giving evidence of a thorough cultivation. Mr. Ferris will act as agent for the *Farmer*. We left the Fort Gratiot road nine miles north of Mount Clemens, and took the plank road for the village

of Ashley, located on Lake St. Clair, and we are informed the only port on the Lake of consequence.

The town is quite new, handsomely laid out, with an active, energetic set of inhabitants. Mechanics of all kinds are fast coming in, and buildings are being erected in every direction. The business of the place is already considerable, and increasing. The *Peninsular Advocate* is published here, it has a good circulation, which is increasing; it is ably edited and no doubt will succeed, as every such paper should. From this place goes out another tap into Macomb county, by way of a plank road from Ashley to Romeo. This road already draws considerable produce from Macomb and Lapeer to Ashley to be shipped. We passed several waggons said to have on board one hundred bushels of wheat, which on their return, will carry merchandise into the country.

ASHLEY.

Ashley has a fine view of the lake, on which we counted twenty-two vessels of different sizes, including one steamboat. It has also three steam saw-mills, at which is manufactured large quantities of lumber. We cannot see why Ashley will not be a town of considerable importance. From this place we went en-route for Port Huron, by way of St. Clair, at which place we arrived in the evening, and took lodging at the Hotel of S. B. Brown.

Bees.

MESSRS. EDITORS:—I noticed in the October number of the *Farmer* an article on the management of bees by Mr. Todd of Bloomfield. As regards Mr. T.'s views on the comb making department, I think he is right. Honey is the original substance from which wax is produced, and its elaboration takes place within the bee. This wax exudes through the scales of the abdomen which lays over each other, something like those of fish. This is contrary to the theories of many apiarists, but it is nevertheless true, and I can convince any candid person that it is so in a few hours' time, if he will call at my place.

By the request of Mr. Noble, I will give you a few of my experiments with the bee this fall, tho' I do not claim the reputation of being an infallible scientific apiarist.

Last September I took a swarm of bees, placed them in a dark room and commenced feeding them good clear honey. They, like good workmen immediately commenced their manufactures.

They reared some as fine comb as I ever saw, and have completed several boxes of honey. I am still trying experiments with them. My boxes are made of glass so that their working may be easily observed. They still remain in a dark room and by the aid of a candle you can see them construct their comb. Their cells are made perfect with wax

alone. I have tried these experiments for two seasons, viz: to prove the truth of my theory about the wax-making department, and to ascertain whether propolis is a natural or manufactured substance. This is a disputed subject; some apiarists contend that it is gathered from the forest while others say it is elaborated from the bee itself. My bees in this hive have completed several boxes of honey weighing from three to eight pounds apiece, all of which were handsomely glued in every crack and crevice, so that all air was excluded except the communication from the box to the hive. But the glue was a much lighter color than that made in the summer. It appears that they have something they use for that purpose; to say it is propolis, I could not; to me it appears more like the wax they construct their combs with. The warmer I keep them the more wax they produce, and the better they solder up their boxes. I have often seen the bees on their return from the woods loaded with propolis, but never caught one in the act of gathering it. I have frequently seen them assist each other in removing it from the cavity of their legs, and placing it where they needed it most.

My bees are at present filling a small glass house. To the eye it looks almost transparent. I shall continue my experiments with them through the winter. I should like to give my views on the treatment of the bee in the various hives now in use, but have occupied too much time already.

Will some good apiarist write more on the nature and management of bees?

Yours truly,

A. F. MOON.

ANTWERP, Van Buren Co., Nov.

N. B. The name attached to the Crystal Bee Palace, should be A. F. Moon, instead of A. F. Moore.

A. F. M.

A HINT FOR A HOME NATURALIST.—It is sometimes found very difficult to procure or to prepare a good clean skeleton of a small animal for study or examination; but the following receipt for its preparation does away with all trouble and is worth being known:—

"Put any subject—such as a mouse or frog (if a bird, strip it of its feathers)—into a box perforated with a number of holes. Let it be properly distended, to prevent the parts from collapsing, or being crushed together by the pressure of the earth. Then place the box with its contents in an ant-hole, and in a few days it will have become an exquisitely beautiful and perfect skeleton. The ants will have consumed every part of it except the bones and ligaments. The tadpole acts the same part with fish that ants do with birds; and through the agency of this little reptile, perfect skeletons, even of the smallest fishes, may be obtained. To produce this, it is but necessary to suspend the fish by threads attached to the head and tail, in a horizontal position, in a jar of water, such as is found in a pond, and change it often, till the tadpoles have finished their work. Two or three tadpoles will perfectly dissect a fish in twenty-four hours."

MICHIGAN FARMER.

ROBERT F. JOHNSTONE AND WARREN ISHAM, EDITORS.

DETROIT, DECEMBER, 1853.

Friends of the Farmer, Attention!

It will be remembered that in the September number, we issued a new Premium List, offering great encouragements to our patrons to interest themselves in the circulation of the *Farmer*. We call their attention to it once more.

FIFTY DOLLARS are offered for the largest subscription list, procured by any gentleman, accompanied by the cash, to be sent in at any time previous to the first day of April next.

THIRTY DOLLARS for the second largest list on the same terms.

FIFTEEN DOLLARS for the third largest list on the same terms.

TEN DOLLARS for the fourth largest list on the same terms.

SIX DOLLARS for the fifth largest list on the same terms.

For the FIVE next largest lists, each FIVE DOLLARS. For the TEN next largest lists, each THREE DOLLARS.

To those who furnish clubs of SEVEN, on our regular terms, we will award and give a copy of ISHAM's Book of OBSERVATIONS IN ENGLAND, or a copy of the TRANSACTIONS OF THE NEW YORK STATE AGRICULTURAL SOCIETY, as the agent may select.

To those who furnish clubs of TEN, we will present copies of Mr. ISHAM's TRAVELS IN EUROPE, and such a back volume of THE MICHIGAN FARMER, as the Agent may select.

A separate List of Premiums is made for LADIES on the same terms.

The conditions of both are, that all lists intended to compete for premiums, may be forwarded at any time to the first of April. The names must invariably be accompanied by the CASH at the regular published rates.

The premiums will all be paid in cash; the names of those who bear off the prizes will be published in the May number of the *FARMER*; and the several amounts awarded will be paid on or after the first day of May next.

Could our friends ask for more liberality from us? As an earnest of our intention to make the *Farmer* a work they shall be proud of, we refer them to the improvements that have already been made since it came into our hands. Our prospectus for the coming year sets forth the objects for which we shall labor in future.

With the aids received from talented contributors, and from writers experienced in agriculture, from every part of the State, we feel sure of being

able to perform all, and more than we have promised. Every department will be well represented—well sustained.

For the further encouragement of ladies to exert themselves in procuring subscriptions, it will be seen by reference to an Editorial in the September number, that any lady who wins a premium, and at the same time outnumbers the gentleman who wins the prize in the same class, may claim from the editor six of the choicest perpetual roses he can select. Who will win the roses?

OUR JANUARY NUMBER.—We shall send our January number to all our old subscribers, and if they like the looks of it we hope to hear from them immediately. If there is no response before the first of February, we shall consider them subscribers for year. The increased prices we now pay for paper and work, obliges us to economise in every possible way, while our outlay for engravings and embellishments, for the coming year will be large. Will those of our friends who take an interest in the circulation of the *Farmer*, just show it to their neighbors who do not as yet subscribe, and ask them to examine it. It ought to be remembered that the *Farmer* is devoted to the interests of Michigan; that it depends nearly altogether for its support on those who are engaged in agricultural pursuits within the limits of the State. And while it gathers and lays before its readers information from all quarters, yet its sole aim is to improve the soil and to increase the products of the Peninsular State.

BACK NUMBERS.—We are obliged to state that we will be unable to furnish complete sets of the present volume. When the *Farmer* passed into our hands, in April last, there were nearly 1,000 sets extra came with it, which we thought would be ample to supply all new subscriptions during the remainder of the year, and leave us a few to bind. Of the whole we have not over five sets left; and while it is gratifying to us to have such an increase, we hope none of our friends will be disappointed when we tell them that we cannot give them complete sets of the present volume. Should, however, any of our subscribers want some of the back numbers to make out their sets to bind, as there are a few of some of the months of which we had some extra printed, we may be able to furnish them, which we should be glad to do. This will show our friends the necessity of sending their names forward at the beginning of the volume, especially as we shall accompany the first number with a very handsome frontispiece, which will be engraved for the January number.

IMPROVED CATTLE FOR THIS STATE.—It will be recollected that in a late number it was stated that Messrs. Streeter and Brothers of Wayne county,

New York, were about to bring some improved Cattle and Sheep into this State for sale. Since then, we have received a letter from them, stating that their whole stock has been sold. Part of their stock was sold to one of our enterprising neighbors in this county, as will be seen by the following extract from the letter:

"We sold all our full blood Short-Horns, eight in number, about the time of starting—to one of your Michigan farmers, Mr. William Blackmar of Plymouth, Wayne Co., Michigan. He put them aboard of the cars this morning for that place. Mr. Blackmar is prepared now to grow up some fine pure Short-Horns of the best variety. Those that he purchased of us are mostly from Geo. Vail's stock of cattle, Troy, of the Bates' family, closely connected with Vail's noted Premium Bull, Duke of Wellington, and some two or three originated from Van Rensselaer's stock of cattle, Albany. We trust that Mr. Blackmar's enterprise will prove profitable and useful not only to himself, but to all about him who are engaged in raising stock for dairy and fattening purposes."

Respectfully yours, &c.,

STREETER & BROTHERS.

Our readers will find a very correct portrait of the Short-Horn bull, "Duke of Wellington," in the June number of the present volume of the *Michigan Farmer*.

DEVON CATTLE WANTED.—E. N. S. writes to us, stating that he wishes to procure a pair of Devon Cattle, and having heard they might be purchased at reasonable prices in Canada, would like to know who has got them for sale in that Province, within a reasonable distance of Detroit. If any of our subscribers in Canada, know of such animals for sale, we shall be glad to hear from them, with their price.

Our own opinion is, that our correspondent can procure as fine Devon Cattle in this State, as he can in Canada. If he wants pure blooded animals, he will have to pay as high a price for them there, as he will here. Besides, as to the price paid in Canada, there would have to be added twenty per cent. for duties to be paid at the Custom House, when imported.

To such inquiries, we are always open, and whether E. N. S. repays us by his exertions or not, we shall always be glad to assist him, or any other friend of the *Farmer*, by obtaining all the information in our power as to where any article may be purchased or obtained, that is wanted for agricultural or mechanical purposes.

We should have answered E. N. S. by mail, but there was no post-mark on his letter, and he himself had not furnished the name of his residence, or the locality where the letter was written. This

is the case with a great number of the letters we receive relative to change of residence, or the alteration of subscription, and it occasions us much trouble and loss of time.

A. Y. MOORE'S ROTATION.—On page 266, in the September number, Mr. A. Y. Moore published a very excellent communication on his system of rotation; but in writing of the clover crops, he says, "first and second crops for seed." This is wrong, and it should have read, *first year the clover was grown for hay, and the second year for seed.*

This correction would have appeared in the last number, but was crowded out by our printer.

This subject of rotation of crops is one that is each year growing of more and more importance to the farmers of Michigan, as the lands are being longer and longer under cultivation. Communications on the subject, detailing the results, giving an account of the systems adopted in different parts of the State, and the expenses incurred, with the cost of work, and all other information of practical value, will be received by us with pleasure; and where it is not a repetition, will be published in the *Farmer*.—Ed.]

SCAB IN SHEEP.—H. N. Shafter of Galesburgh, having a large flock of three-fourths blood Spanish Sheep, a part of them were affected with the scab; to cure them, he made a strong decoction of tobacco in about the proportion of eight pounds to every fifty sheep; the decoction he put into a large tub, into which he plunged the sheep; in about a week after he made an ointment of two pounds sulphur to one gallon of train oil, with which he anointed the sheep from head to tail; only on the top of the neck and back. The decoction of tobacco and the ointment, he says, has effected a perfect cure, and his sheep are now healthy and doing well.

H. N. Shafter of Galesburgh, is in favor of deep plowing, and wishes to know where to obtain a plow that will turn a smooth good furrow twelve inches deep. Any plow-dealers having such, please respond, stating price.

CURE FOR FOUNDER.—W. T. Noel, of Niles, sends the following recipe, which he recommends from long experience as being successful with him:

"When the horse is discovered to be affected with founders, take strong slacked lime and sift it carefully, so that no lumps of unslacked may be mixed with it, and mix it with a quantity of hogs' lard till it forms a thick paste in such quantity as may be wanted, but the stiffer it is the better. Then commence where the hair joins the hoof, and work this paste into the hair and skin of the limbs affected, somewhat above the knees, and then smear a coat of the paste well over the hair. Let this be done morning and evening while the heat

of the fever continues to remove the lime and the lard. If the ointment is put on thoroughly at first the operation will not need to be repeated more than two or three times. The effect of the lime need not be feared, as the lard protects the hair and hands.

"This application will be found very efficacious in all cases of inflammation in men as well as animals; such as gangrenes, heating, &c., and even in cases of inflamed breasts in women, when some water is mixed with olive oil, or even with lard, it has been found beneficial."

A BANK FOR DEPOSITS.—Our readers have mostly sold their produce at prices which have left them with something over, after paying their expenses for the past year. Without doubt, a good many of them are looking round for some safe place to invest a portion of it, where they will get the largest rate of interest. We have got a bank of deposit, where they will be sure to get both principal and interest back before the end of the year, and we ask them to consider if they can do better.

A SEVERE LOSS.—We see that Mr. Thorne of New York, who purchased the high priced cattle in England, which were noticed in the last number, lost one of his very best cows on board the steamer on which they were shipped. The animal killed was *Duchess 68th*, a cow for which Mr. Thorne paid \$1500. The ship had a very rough passage; six valuable Southdown Sheep, from the finest flocks in England, being killed, out of seventeen which were on board.

N. A. Pruden, of Ann Arbor, is one of the most extensive and successful breeders of poultry in Michigan. His stock is quite extensive, having raised the present season 190 chickens of the most popular varieties of fowls, worth from \$2 to \$4 per pair. His stock is pure, and to him have been awarded premiums at each State and county fair. He can supply pure Shanghae, Chittagong, Bantams, and Cochin China, and the crosses of the same with each other, and with the common poultry. Those wanting choice fowls will do well to make application soon. Mr. Pruden has sold the past season 30 dozen eggs at \$3 per dozen; the product of ten hens.

PROFITABLE HENS.—David Depue of Pittsfield, Washtenaw Co., has 160 hens which he has kept the past season, 130 of which he kept shut up in a yard, embracing an area of about 182 square feet. They have been fed upon oats and barley, as their principal food, with corn once a week. From the hens, he has sold twelve hundred and forty dozen eggs, and estimates that he has used one hundred and twenty dozen, making in the aggregate *thirteen*

hundred and sixty dozen eggs; worth on the average 9½ cents per dozen, making \$129 20 for the eggs. The hens have not been fed any flesh, but were permitted to run out for an hour or two before going to roost. He has raised no chickens. The fowls are of the common breed, mostly; a few are mixed with the Polands.

The article by J. S. C. has no practical value for the readers of the *Farmer*, and is not in consonance with the design of this periodical; we are, therefore, obliged to decline it.

PATENT OFFICE REPORTS.—We are indebted to Hon. E. J. Penniman, for the agricultural and mechanical part of the Patent Office Reports for 1851 and 1852, for which he will accept our thanks.

A RARE HEIFER.—At the Rutland County Fair in Vermont, a yearling heifer was exhibited by M. H. Winchell, of Poultney, which had given four quarts of milk per day for two months previous, although she never had had a calf.

RANSOM'S SHINGLE MACHINE.—One of the most ingenious machines exhibited at the State Fair was Ransom's Shingle Machine, which astonished every one by the ease with which it turned out shingles from the bolts, which were given it to slice up.

ELLWANGER AND BARRY'S CATALOGUE.—We have received a copy of Ellwanger and Barry's Descriptive Catalogue of Fruits cultivated at their nurseries near Rochester. It is a well arranged and excellent list for reference, that may be consulted with advantage by those who desire to purchase.

THE LITTLE PILGRIM.—We have received the first and second numbers of this periodical: a monthly journal, quarto form, eight pages, edited by Grace Greenwood. It is designed for boys and girls; possesses a high moral tone; well filled with interesting and instructive articles. Each number contains sketches of her travels in Europe. From the well known popularity of the author, we doubt not the Pilgrim will be fully sustained. Published by E. P. Lippencott, Philadelphia. Price 50 cents a year in advance.

EFFECTS OF DRAINING ON PEARS.—Col. Henry Smith, of Chicago, we perceive by a notice in a Chicago paper, has found that under-draining enabled him to raise good pears where he was formerly baffled. He procured some trees of the *Beurre Diel* variety, a very delicious fruit, and having drained his orchard by simply digging trenches and putting down two-inch boards nailed together at right angles in this shape A. He has been amply repaid for his trouble by the crop of fine fruit which was the consequence.

HORTICULTURAL DEPARTMENT.

S. B. NOBLE, EDITOR.

Western Apples.

J. J. Thomas, the Horticultural editor of the *Country Gentleman*, in noticing a collection of western apples sent to him by Dr. Kennicott, and other gentlemen who took a deep interest in the convention of north-western Fruit-growers, lately held in Chicago, says: "In looking over this collection we were particularly struck with the great size and beauty of some of the specimens exhibited there, as compared with those grown in the north-eastern states. Specimens of Jonathan apple from Illinois were as large as good Spitzenburghs or Baldwins, and possessed a brilliancy and smoothness very rarely equaled by any fruit. Such apples would unquestionably sell in New York or Philadelphia for five or six dollars per barrel, at the least. Some of the Fallowater were as large as well grown Fall Pippins; and Rambos were at least double the size of ours. Other sorts, as for instance, the Esopus, Spitzenburgh, Pomme Grise, Pennock, Maiden's Blush, and Yellow Bellflower possessed no superiority in size.

To keep Peach Trees from freezing in Winter.

A very intelligent German gentleman, who is at present traveling in Europe, and occasionally corresponds with the *New York Evening Post*, during a visit which he paid to the Agricultural College of Hohenheim, in Wurtemberg, obtained the following recipe to keep peach trees from freezing in winter, which is practised at that institution:

"Strip the peach trees as soon as possible after the fruit is taken off, of all foliage. Then dig deep all around the tree, for three or four feet in circumference."

The Garden Inspector Luucas stated that he had used it for several years, and had found that it never failed. He gave as the theory for this remedy the following:

"The leaves being taken off will prevent the swelling of the buds, because the leaves operate upon trees as the respiratory organs, and are, therefore, apt to impart life to the buds during the warm days which generally occur in October or November. The digging around the tree destroys those roots which are easiest affected by the outer atmosphere, and their destruction prevents the sap from starting, except late in the spring, after warm weather has fully set in."

Mr. Luucas is stated by the visitor to be a very intelligent practical horticulturist, of deservedly high repute. He showed plenty of trees well loaded with fruit of good quality, that had been treated as above, while other trees, left to themselves, were almost entirely barren.

BEST SUMMER PEARS.—The Pennsylvania Horticultural Society have described the *Ott Pear* to be the best summer pear, and the *Tyson*, the second best. The committee who reported, stated that the present season was the fifth consecutive season for which they had had this excellent pear submitted to them, and it is considered the "most delicious of summer pears."

CLIMAX PRAIRIE NURSERY, KALAMAZOO CO.—We call the attention of the farmers of Climax and the adjoining towns to the Nursery of H. Dale Adams, situated at that place. Mr. Adams informs us that his assortment of fruit trees is quite extensive and of suitable size for setting, and we hope he will receive the patronage of such as want a supply of trees, and prefer those grown in our own State, and fully acclimated which we think an important consideration.

A MONSTER CHERRY TREE.—There is in the town of Shawangunk, Ulster county N. Y., on the premises of John Bruyn, Esq., a cherry tree of such size, beauty and productiveness as cannot, perhaps, be excelled in our country. This tree measures thirteen feet in circumference around the trunk immediately under the limbs, and fifty feet across the extreme point of one limb to that of another immediately opposite. It cannot be less than forty-five feet in height.

FINE APPLES.—We received seven samples of fine apples from Mr. James Luscomb of Bellevue, in Eaton county, among which was a large Twenty-ounce apple, sometimes called the Cayuga Red-streak. This one weighed eighteen ounces, and was very handsome in appearance. There was also a fine specimen of the Northern-Spy. We also received from Mr. Ryan, New Lisbon, Columbiana co., Ohio, twelve named specimens, which were received too late for the Fair. These were from Ohio, and were prevented from being exhibited, owing to the accident to the May Queen.

CRACKING PEARS.—C. M. Hovey, a resident where the cracking of choice fruit is a disease that prevails to a considerable extent, appears to think that our native pears are not so liable to this malady as the foreign sorts. In a late number of his Magazine of Horticulture, he says: "The Beurre Diel, Napoleon, Doyenne, Leon le Clerc, &c., often crack and split open; when on the same soil, and close by the side of them, Swaar's Orange, Sheldon, Lawrence, Collins, Seckel, &c., show no signs of such defect. We have just twenty-five American sorts of pears standing in one row, and every one is bearing sound and beautiful fruit; while on the opposite side of the walk, some of the foreign trees have lost half their crop by cracking open."

The New Ohio Strawberries.

Great interest has been felt as to the character and value which a fair trial should develop for these new sorts, in other localities than Cincinnati, the place of their origin. It appears that they have sustained fully at Philadelphia, their western reputation; while at Boston, according to Hovey's Magazine, they have proved almost a total failure. Some persons, no doubt, will be ready to make great allowance for the decisions in the latter instance, on account of previous prejudice in favor of those of Boston origin, yet this cannot be the sole reason of the unfavorable verdict. In western New York, McAvoy's Superior, which stands at the head, has proved an exceedingly productive, very large and high flavored berry, better in quality than Hovey's Seedling, but not equal to Swainstone and Burr's New Pine. We should think it too soft for extensive marketing. It may afford some interest to our readers to give, side by side, the characters of these four seedlings, as first given by the Cincinnati Committee, and as now given by M. C. Hovey, at Boston, and by the Pennsylvania Horticultural Society at Philadelphia, where the climate is not unlike that of Cincinnati.

McAvoy's No. 1.—"Pistillate, large, prolific, bright scarlet, not high flavored, but the handsomest dish on exhibition.—*Cin. Com.* "Does not set freely, even with a good staminate variety beside it; only a moderate bearer of fair size, color too dingy, and watery nature of the fruit, renders it almost useless as a market berry; flavor rather insipid.—*Hovey.* "Large, roundish, deep scarlet, seed light crimson, indentations rather deep, intervals not ridged, flesh whitish, partly stained with red; flavor agreeable, quality 'good,' perhaps 'very good,' an abundant bearer."—*Phil. Com.*

Schneike's Pistillate.—"Large, medium quality."—*Cin. Com.* "One of the sourest strawberries we ever ate, and not only sour but bitter, and disagreeably flavored; color pale scarlet, and berries, even before ripe, looked as if they had been picked and begun to decay; we consider it quite worthless."—*Hovey.*

Longworth's Prolific.—"The largest and most prolific hermaphrodite strawberry known to the committee, and equally prolific with any other variety. The plant is more hardy than Hovey's, and recommended for general cultivation, after four year's trial."—*Cin. Com.* "A very good berry, but only of fair size and medium quality, being rather acid. The color is dull, and the general appearance of the berry, inferior."—*Hovey.* "Very large, roundish ovate, brilliant crimson, seed of the same color, sometimes yellowish, set in rather deep indentations with rounded intervals; flesh red, flavor fine, quality 'very good'; a variety of great excellence, perfect in its sexual organization, and remarkably productive, a rare circumstance with staminate varieties of large size."—*Phil. Chron.*

McAvoy's Superior.—"Pistillate, very prolific, large, dark colored, high flavored and luscious; a hardy plant; the specimens exhibited superior to Hovey's Seedling or any other strawberry that came under the examination of the committee, and entitled to the premium of \$100, offered by the Society in 1847."—*Cin. Com.* "Very little different from No. 1. The berry is only of fair size, and of a very dark, dingy color, like the Hautboy, with yellowish seeds; flesh thin and watery, and flavor only of medium quality. It has the same fault as No. 1,

does not set and fill up well. Though the best flavored of the four, it is far inferior to many of the old varieties."—*Hovey.* "Mr. Cope's specimens were of great size and beauty, some of them measuring five and a half inches in circumference. Fruit very large, roundish ovate, occasionally slightly necked, deep brilliant crimson, seed crimson, sometimes yellow, set in indentations not deep, except in the largest specimens, when the intervals are also somewhat ridged; flesh red, flavor exquisitely fine, quality 'best.'"—*Phil. Com.*

It is interesting thus to compare results in these three distant cities, and although some allowance will be made for the unfavorable character of the report from Boston, we are satisfied that these sorts, or most of them do better further south than at the latitude of Boston and Rochester; although, as we have already stated, McAvoy's Superior has proved a fruit of great excellence and value in the neighborhood of the last named city.—*Country Gentleman.*

Prairie Flowers and Prairie Grass.

Mr. Bateham, the editor of the *Ohio Cultivator*, has lately been on a tour of observation through some of the states in which extensive prairies exist, and he writes as follows relative to the flowers and grasses he noticed as flourishing on them:—

"The prairie flowers! How vain is the attempt to convey in words an idea of the profusion, variety and beauty of the prairie flowers, as seen in these vast parterres in God's own flower garden! How utterly insignificant and peurile in comparison are all the results of human skill in floriculture! We had read many descriptions of western prairies and prairie flowers, but the reality far exceeded in grandeur and beauty all our conceptions. Our first and greatest mistake was in supposing that most of the prairies were level plains, without enough variety of surface to prevent monotony, whereas we found them almost always undulating, with slopes and valleys of various width, and not unfrequently almost hilly. Next we had supposed that in summer the prairies were covered with tall grass, so that if flowers were seen at all they must be sought for beneath the grass; but we were surprised to find that excepting in the wet prairies or the sloughs (called "sloos,") the grass is quite light, while flowering plants of divers kinds tower far above the grass, some varieties even to 6 or 9 feet in height.

Of the flowers which we found in bloom on the prairies, some were entirely new to us, and some we had only seen cultivated in gardens, but the majority we had before seen growing wild in Ohio or Western New York. We will name a few of the more beautiful or conspicuous species as seen in midsummer, (the spring flowers being gone,) mostly upon the dry sandy prairies of Illinois and Iowa. We give the common name when known to us.

Lilium, lily—2 or 3 species. *Rosa lucida*, wild rose, *Oenothera*, tree primrose—several species. *Batschia Gmelina* and *canescens*, puccoon root. *Asclepias tuberosus* and others. *Coreopsis*—3 or 4 species. *Rudbeckia*, many species, very showy. *Monarda*, wild bergamotte. *Apocynum*, fly-trap. *Campanula*, bellflower—2 or 3 species. *Castilleja coccinea*, painted cup. *Ceanothus Americanus*, Jersey tea, or red root. *Lathyrus* and *Phaseolus*, wild peas and beans. *Baptisia*, indigo plant. *Amorpha*

canescens, lead plant. *Gerardia*—several species. *Polygala senega*, snake root. *Helianthus*, wild sunflower. *Euphorbia corollata*. *Gaura biennis*. *Penstemon*—several species. *Veronica*—do. *Petalostemum*; this is a very beautiful flower, which we had never before seen, and is richly deserving garden culture. There are two species or varieties—violet and white. It is quite abundant in Illinois. *Malva violacea*; this is very beautiful and rare; we only saw it in one locality, on a dry prairie knoll, a few miles east of Morris, Ill. *Liatris*, or prairie feather—2 or 3 species, very showy and abundant. This and several species of *Aster* and *Solidago* were just approaching to maturity at this time, (July 15th to 20th.) and from their profusion must produce a brilliant display on prairies in August and September. In addition to some of the foregoing which abound on the poorer and dry prairies, there are several very conspicuous flowers which belong more especially to the rich or moist prairies, and may often be seen in beds of several thousand acres, mostly of one kind, as the *Silphium laciniatum* or rosin weed, growing 6 to 8 feet high, with a blossom like the sunflower; and in moist rich places, several beautiful species of *Phlox*, *Penstemon*, *Gentian* and *Spirea*.

Of the *Grasses*, we observed but very few species on the prairies, excepting near to settlements, and probably introduced. The annual burning of the surface is no doubt unfavorable to their growth. All the prairie grasses, so called, are species of *Carex*, most of which form dense masses or clumps of roots, and are little injured by fire. They produce very little if any stalk or seed, and not a heavy crop of leaves except in "sloos" or moist places where few other plants are to be found. Cattle thrive well on the prairies until about August, when the forage becomes ripe and innutritious. The hay made from prairie grass is better than we should have expected, though not equal to that from cultivated grass.

THE ENDICOTT PEAR TREE.—A pear tree is standing in Danvers, Mass., which is often said to have been imported by Gov. Endicott, in 1630. The public, however, are not generally aware of the facts relating to the history of the tree. C. M. Endicott, Esq., of Salem, in a communication to Hovey's Magazine, has gone into the matter elaborately, and has made out a strong case in support of the traditionary account, showing that this is the oldest "living and fruit bearing tree in the country, having rounded out a period of two hundred and twenty-three years!" Mr. Endicott adds that the American fruit trees, which "approach nearest to it in age, are the pear tree of Gov. Stuyvesant, in New York, which claims to have been imported from Holland in 1697; an apple tree of the pear-main variety, imported into Connecticut in 1638, by Gov. George Wyckey (Wylla) and bore fruit last year, on the 'Charter Oak' place, owned by Hon. T. W. Stuart, of Hartford; the pear tree of Gov. Prince, of the Plymouth Colony, at Chatham, which was brought from England by him somewhere between the years 1645 and 1649; the apple tree, planted, according to tradition, in 1640, at Marshfield, in this State, by Peregrine White, the first English child born in New England. After these, by dropping down more than a century of time, we find the 'Lady Petre' pear tree in Bartram's garden in Philadelphia, which is said to be 116 years of age."—*Boston Cultivator*.

LADIES' DEPARTMENT.

Farm Life.

MESSRS EDITORS:—Though I have never contributed to any periodical, I would like to say a word or two of encouragement to the wives and daughters of farmers, through the Ladies' Department of your paper. I am a farmer's wife and am proud to say that I do not consider my occupation a species of vulgar drudgery of which I need be ashamed to speak in any company. I look upon it as highly conducive to health, and and fraught with many opportunities for improving both the mind and the heart. But let me introduce myself more plainly.

I live in the North-west corner of C— County, Mich., not, however, entirely out of the reach of civilization, for there are many highly cultivated and even gifted minds among the farmers and their wives and daughters in this community. When my husband located himself upon this farm it was a wilderness. We have not only seen it "bud and blossom as the rose," but we have had the pleasure of plucking and eating fruit which was rendered doubly sweet by the reflection that it was of our own raising. I have often had to confess myself poorly qualified for a farmer's wife, for she needs to know so many things of which city Misses are entirely ignorant, and yet I find that there are pleasures in our way of life that need but to be known to be appreciated. One great source of enjoyment is the cultivation of flowers and shrubbery, of which almost all our sex are fond; and we may even venture into the kitchen garden without overstepping our bounds. If we do not wish to use the hoe ourselves (which I confess I have often done) we may give directions, and drop the seeds for our husbands to cover. The pleasure we experience in gathering the fruit of our labor and preparing it for our mutual enjoyment is an ample reward for all our toil. In a wild country like this we cannot expect to have the recreations and amusements of city life, but there are others in which we may indulge equally innocent and much less expensive. Not far distant from our house is a beautiful little lake abounding with fish, and my husband and I often spend a few hours there very pleasantly with pole and line trying our fortunes among the finny tribes. These and like recreations may often be enjoyed while we have the satisfaction of knowing that our duties in doors are discharged, and that we have saved time by the swifter motion of nimble fingers.

Then again, how delightful is the family circle around the farm fire in the long winter evenings. When the fruit is brought forward and the Greenings Pippins &c., invite us to discuss their merits, what wonder if this or that one does have our decided preference when it is known that with our own

hand we helped to plant the little sprout, which at length became the thrifty tree and yielded us such fruit.

Who will say there is not happiness in a life like this when we can look around and say the fruits that we enjoy are of our own planting. E. F. L.—

BEDFORD, Oct. 1853.

A Beautiful Letter.

We are permitted to make the following extracts from a letter written by a gentleman in New York to his niece in this city. It is indeed a beautiful letter replete with sentiments which are well worth the consideration of all young ladies. Would that there were more "Uncle Stephens" in the world.

MY DEAR KATE:—I was very glad to receive your little bulletin announcing the safe arrival of the Piano and your approval of its tone. Your father's economical views did not admit of a very ornate setting, but what is the casket to the jewel? Handsome pianos are as common as blackberries, but those of intrinsic excellence are as rare as musical peacocks. I would not give a pinch of snuff for a cargo of beautiful cases. Give me the instrument that has a soul; the outer framework is only the shell to the nut, the husk to the corn, the raiment to the man. Beauty is a good letter of introduction, but the mind and heart must be in keeping with the promise of the face and form or we despise them both for their false pretensions—like elegant penmanship, ungrammatical in composition and orthography—melancholy proof of care for show at the expense of substance.

I am rejoiced, dear Kate, to hear you are at your studies and earnestly attending to the cultivation of your powers. Goodness and intelligence are the only permanent attractions.

*Beauty in vain her pretty eyes may roll,
Charms strike the sight, but merit wins the soul!*

Indeed the only beauty that gains permanent regard is that which beams in an amiable countenance, that has become chiselled into attic grace by the reiterated impressions of polished thoughts.

Mere conformation, bloom and complexion are but accessories to the beauty of "the human face divine;" purity, goodness of heart and the elevated aspiration of a cultivated mind breathe soul into them, and they live, else are they but roses on a sepulchre which is "fair without, but within, full of rottenness and dead men's bones." O, for a spark of that Promethean fire that made the beloved disciple so "almost angelic," to diffuse the glow of heavenly radiance over the forms and features of the beings I would love!

I am happy to say that I discover traces of visible progress in your letter. It is quite another thing from those you wrote when you first went to G—— B——, and breathes a spirit of self-respect worth all the vanity that ever fluttered in the para-

dise of fools. Think not that I would deny enjoyment to youth. I would only persuade them to believe that they mistake the sources of enjoyment when they think them to be the brainless toys and stupifying intercourse of the uneducated and unvirtuous. There is a good fable of the ant and butterfly. While the former was harvesting in summer the provisions needful for winter sustenance, the glittering insect spent the golden hours in fluttering from flower to flower and sipping sweets, forgetful of the future and desiring only the pleasures of the hour. When winter came the ant retired to its garnered stores, and reposed in comfort upon the fruits of its industrious foresight, while the vain trifter was expiring with want. "O spare me food to save my life!" was her penitent petition to the ant, who only replied, "There is not enough for me and thee—thou hast piped in summer, thou must dance in winter." How much better to be an ant than a butterfly.

Believe me ever, your affectionate,

NEW YORK, Oct., 1853.

Old Uncle—STEPHEN.

To Correspondents.

"S. F." of Clinton county, Mich., writes an earnest little note asking what has become of all our lady contributors, and urging those who have been remiss in writing, to take their pens again with the resolution to redeem their credit, and occupy their department as becomes them. We join her in this request. Her queries in reference to "Kate" and "J. of Oak Lodge," we cannot answer. Of "Inquirer" and his "west eighty" we know nothing more than "S. F." herself. Doubtless, satisfied with the notoriety he acquired, he has retired into private life, where we are quite willing he should remain as far as the *Farmer* is concerned.

The Editorial in the October number explains why some letters sent us, have not appeared. We have still some valued and faithful correspondents, who, with the new ones coming in, will see that the Ladies' Department of the coming volume does not lack interest. Among these, "Mrs. E. P. F. B." holds a high place. Her truthful articles descriptive of country schools and teacher's trials, have attracted much attention, more than one having been copied into newspapers. There is a life-like earnestness about them, which shows that she writes from experience. Many writers fail of interesting because they attempt a dissertation on some subject they are not familiar with, or a description, high-wrought and far-fetched, perhaps, of things and scenes which in themselves are too common-place to excite interest.

The Educational Department may furnish a greater variety of incidents, but surely the home life on a farm is not wholly destitute of inviting

themes for able pens. The joys and sorrows, hopes and discouragements, the improvements, inventions and changes affecting the farm-house occupants, are all so many departments in the school of experience, from which instruction may be drawn that can often be imparted to others with mutual profit. The kitchen, the dairy, the garden, the fire-side circle, each has its little history, and each is suggestive. But the writer is not limited to household duties; there are other and broader fields for the exercise of her talent. She can suggest plans for saving and improving time, which is thoughtlessly wasted by too many, and by her example prove the utility of her precepts. A thoughtful woman, willing to aid in improving the condition and elevating the minds of her sex, will be at no loss for themes of interest and importance, so long as there are evils to be remedied, or changes desired. Such writers are heartily welcomed to the Ladies' and Educational Departments of the *Farmer*.

Preserving Eggs.

EDITORS OF THE FARMER:—Knowing how much trouble many housewives have in keeping eggs good through the winter, I send you the following receipt to publish for their benefit. It is simple but effectual.

Wrap each egg closely in a piece of newspaper, twisting it tightly to keep out the air, place them in layers in a box with the small ends down, and set them where they will be cool without freezing.

I have seen eggs kept till spring in this way better and fresher than those laid down in salt; besides you are not troubled with the salt adhering to the shells, which is no small consideration to those who have the handling of them. You have only to untwist the paper and the egg comes out as fresh and clean as if just taken from the nest.

PRESERVING BUTTER.—The farmers of Aberdeen, Scotland, are said to practice the following method for curing butter, which gives it a great superiority over that of their neighbors:—

Take two quarts of the best common salt, one ounce of sugar and one of saltpetre; take an ounce of this composition for one pound of butter, work it well in the mash, and close it for use. The butter cured with this mixture appears of a rich, fat, marrowy consistence and fine color, and acquires a brittle hardness, and does not taste salty. Dr. Anderson says: "I have ate butter cured with this composition that has been kept for three years, and it was as sweet as at first." It must be noted, however, that butter thus cured requires three weeks or a month before it is used. If it is sooner opened the salts are not sufficiently blended with it, and sometimes the coolness of the nitre will be perceived, which totally disappears afterwards. The above is well worthy the attention of every dairy woman.

EDUCATIONAL.

School Government.

I wish to say a few words to "E. W. C.," in answer to his communication which appeared in the October number of the *Farmer*. The view he there takes of the article entitled "Love the Little ones" is altogether wrong, as any sensible, candid person may see. He assumes for me what I never thought of "inculcating." That the three "notions," as he calls them, which he so methodically arranges and labels "1," "2," "3," are no part of my creed I could easily prove by instances even more to the point than that of his experience with the little "finger-sucking girl."

The man has worked himself into a state of high indignation with his "dangerous tendencies" and "suicidal doctrines;" he has brought forth labored arguments showing great research among dictionaries, ancient philosophers and judicial tribunals, for long words, wise conclusions and proofs of human depravity, and then signed the accusation and brought in a verdict against himself, "Guilty of the same crime for which 'L' is arraigned." Did he not love his little Ann Eliza? and what more did 'L.' ask of him or any other teacher? That is not love which shrinks from enforcing judicious discipline—it is weakness. A teacher who truly loves his pupils, will first be faithful in the performance of his own duty and then require and secure obedience from them. Inasmuch as no one is free from faults it is one part of a teacher's duty to acknowledge his wrong, if he has committed one, and not as I have seen some, endeavor to maintain a position they know to be false through fear of losing their dignity by concession. Children quickly discover and heartily despise such duplicity.

In the case of my little Lizzie I knew that I was in the wrong and the whole school knew it too. She had rights which I had disregarded; did she or they love or respect me less when they saw tears in my eyes and the little conqueror seated in triumph on my lap? "E. W. C." would not have thought so if he had been with me through the seven months in which I presided in that little brick school-house; for it was not a "log cabin."

The new teacher with her new system of teaching was so well liked that in compliment to her the room was ceiled before winter set in, a new stove supplied the place of the broken old one, wood was provided and everything necessary for the comfort of herself and the "little ones she loved." But for "E. W. C.'s" especial gratification I will assure him that I have used the rod several times without remorse on my part, and with very evident benefit to those to whom it was applied. So my learned censor can see we are not quite so "antipodal" in our ideas of school government as he imagined.

As to those horrid visions which "the lucubrations of our pseudo-philanthropists" have raised in his imagination, "the drunkenness, rowdiness, licentiousness, pert precociousness" and other "peculiar concatenations of circumstances" which this "method of procedure," this "ignis fatuus of fluctuating experimentalism" has brought about, I can only hope with him that "time," "the researches of modern astronomy" and his "more rational system of ethics," will "dispel" them as soon as possible. The spirit in which he writes shows that gentlemanly courtesy is not one of his weaknesses, but it is hoped that if he is spared to double his "short educational career of thirteen years" he will be wiser than to waste such a "dread paraphernalia" of words on a "fair but deluded correspondent" like,

L. OF ST. JOSEPH.

An Ode.

At the recent Vernon Town Fair, the following pretty ode, from the pen of C. S. PERCIVAL, Esq., was sung by the Vernon Glee Club:—

There is a Giant, strong and brave,
And generous as great;
Who for the feeble race of men
Doth early toil and late.
He delveth in the musky mire,
And on the furrowed lea;
And, with his vessels built of oak,
He plows the stormy sea.

The forest falls beneath his axe,
And cities vast arise;
And verdant fields look smiling up
To greet the smiling skies.
He builds the mansion towering high,
The little cottage near;
And fills, to overflowing both,
With all the heart can cheer.

He chains the streamlet to the wheel,
And bids it turn the mill;
He harnesses the iron horse,
And guides him at his will.
His powerful arm defends the weak,
Against overpowering wrong;
And grateful hearts conspire to praise
The Giant, great and strong.

Fair hands have twined a wreath to deck
His rugged brow with bay,
And we, with joy, have met to keep
His festival to-day.
Then farmers, artisans, and all
Who scorn your task to shirk,
Come, join your song with ours, to sing
The mighty Giant, WORK!

PEARS ON THORN STOCKS.—The present system of dwarfing fruit trees, which is said to be applicable to the pear, as well as to other varieties of cultivated fruits removes in a great measure the objections urged against the thorn, by nurserymen. It has generally been asserted, and no doubt truly, that while the scion of the pear does remarkably well, and makes a rapid growth on the thorn, the latter is not large enough to secure a good sized and healthy tree. But in dwarfing, the size is a secondary consideration. Very productive trees are obtained by this method, and they are very generally preferred in consequence of their being less liable to injury from winds, more easily managed and requiring far less ground. Thorn stocks, also are easily obtained, whereas quince stocks and pear stocks are extensive, and obtained only with difficulty, and from a distance of those who grow them for sale, and at an exorbitant price.—*N. E. Farmer.*

Poultry for the New York Market.

The poultry trade, like the fruit trade, is only in its infancy, and every year the demand is increasing. The market in this city is far from being fully supplied, and we notice that in Chicago, which has advantages we do not enjoy, from the greater area of country whose population sends its products to that city for sale, there are occasional complaints of the supply being short. The Great Western Railway through Canada will be open in January, and will consequently give our poultry raisers the benefit of the New York market through the winter, and afford an opening that has never yet been enjoyed; of getting the highest market prices for their live stock whether quadruped or biped. The following answer to enquiries as to the best way to put poultry up for market, contains all the information necessary on the subject; it is taken from the New York *Tribune*, and everybody in the west ought to read it:

PREPARING POULTRY FOR MARKET.—We have received several letters from Ohio and Indiana, asking whether it would pay to send poultry by railroad from the West. That question is easily answered. It will pay, if those who raise it will be content with half the retail price in our quotations every week. "Freight and commissions" will consume the other half. The hucksters, those who monopolize all the produce and fix the price to the producer and consumer, have no conscience, no care for aught but large profits. "How shall I dress and pack my turkeys, geese, ducks and chickens, to send to the New York market?"

That question is also easily answered.

Hang your turkeys up by the heels and cut the jugular vein. Pick them dry. Remove the intestines and wipe the inside dry. If you use water at all, do it by holding the bird by the legs and letting an assistant pour the water through them. Wipe and hang them up in a cool place twelve hours, or till thoroughly dry. Serve geese, ducks and chickens the same way. Do not scald them, unless you would like to have them spoiled. Take a box that will hold 250 chickens close packed. Put only 200 in it. The remainder of the space fill with rye straw—clean rye straw—no chaff. Do not use wheat straw, or oat straw, if you can avoid it. You may use coarse, clean, marsh hay. A wisp of straw in each bird will be advantageous. Nail up your box tight, and hoop strong, and mark plainly what is in it, and to whom it is sent. Send only in cold weather.

"To whom can I send my poultry for sale?"

We cannot tell you. Look to the advertisements and make your own selection of a commission merchant. You had better send by express, and take a receipt of the agent guaranteeing the delivery of the box in three days in this city, and thus anybody and everybody who raises or buys chickens along any of the great western railroads, may send them to this high priced market during all the cool months of the year.



Stewart's Patent Stump-Puller.

Mr. Noble in his "Rambles," describes a very effective stump-puller which we have heard highly praised, and which has been used very successfully in New York. In the above cut we present a view of a very good one that is cheaply constructed, and which was patented in 1851. The proprietor of the patent, we believe, is a Mr. William Willis of Orange, Massachusetts. They have been manufacturers of various sizes; costing from \$50 to \$200. The purchase obtained, ranges according to the size

of the machine, from 250 to 1000 tons. A single horse being sufficient to pull out the largest and roughest stumps; a smaller costing about \$50 is generally as powerful a machine as any common farmer requires.

The one mentioned by Mr. Noble is rather more complicated than this one, but exerts an increase of power, being a combination of the screw and lever. The principal fault is the liability of the screw to get out of order, by not being made of strong enough material to resist the immense power exerted.

From the Scientific American.

List of New Patents,

Relating to Agriculture and Domestic Arts, up to November 1st, 1853.

FENCES.—By Hervey S. Ross, of Cincinnati, Ohio: I claim the zig-zag and interlocked arrangement of panel, supported by a swivel joint to posts at suitable intervals, and having the joint between the two middle pannells furnished with inclined hook and eye, each of said middle pannells being provided with boards sloping in opposite directions, so that by the action of a flood, each half of the intervening line of pannells may separate midway and swing in direction of the current, or devices substantially equivalent.

HEMP BREAKER.—By Oliver S. Leavitt, of Marcellus, N. Y.: I do not claim as my invention the beating of flax or hemp straw into grooves for the purpose of divesting it of the shives or the woody portion thereof, or the use of rollers for moving the material to be broken, as that has been done before.

But I claim the combination of a reciprocating beater with parallel blades, set at decreasing distances from each other, with a fixed bar fluted or serrated, to correspond with the blades and spaces of the beater.

GRAIN AND GRASS HARVESTER.—By Philo Sylla & Augustus Adams, of Elgin, Ill.: We claim first the weighted levers or their equivalents substantially as described which carry the sickle bar and sickle, and allow them to vibrate perpendicularly, and accommodate the sickle to uneven ground, in cutting grass, which levers may be made permanent when cutting grain, as described.

Second, the linked or hinged brace, or its equivalent in combination with the levers, which brace prevents the sickle bar from being traversed longi-

tudinally by the action of the sickle, but allows it to vibrate perpendicularly, and accommodate itself to uneven ground, as described.

Third, the stands of the binders constructed so as to allow them to stand so much lower than the horizontal platform that they can bind the gavels into sheaves with greater facility, far less labor, and much faster than by any of the modes heretofore practised.

SEED PLANTERS.—By Peter Horn of Hagerstown, Md.: I claim the spring, in combination with the projection and arm or lever, for the purpose of opening and closing the recess through which the seed passes, as set forth.

Second, I claim the arm or lever, in combination with the lever and fulcrum, for the purpose of raising or lowering the drill tubes and operating the springs, as described.

CORN PLANTERS.—By G. A. Bruce, of Mechanicsburg, Ill.: I do not claim the dropping slide nor any peculiar arrangement thereof, as they are used in many drills, and are constructed and operated as described.

I claim the employment or use of the balance beams, with the rods attached to them, and operating as described, for the purpose of properly adjusting the seed in the holes of the dropping slide, and also to prevent the clogging of the same, as described.

MACHINES FOR TOPPING COTTON IN THE FIELD.—By A. A. Dickson, of Griffin, Ga.: I claim the employment of two sets of cutters, one set being adjustable, and revolving in a horizontal direction, and the other being fixed, and revolving in a vertical direction, and both sets being set in operation through the action of the driving or propelling wheel, in any manner as specified.

Plows.—By R. A. Graham, of New Paris, Ohio:

I claim, 1st, the screw bolt, or its equivalent, for setting out or in the rear edge of the mould board, with respect to the landside, acting in combination with the bolts E and F, which being tightened, attach to each other, the mould board, sheath, and lipped or flanged share, as described, and which bolts being temporarily relaxed, permit the vibration of the mould board about the bolt, E, without interrupting the continuity of plowing surface, or disconnecting the several parts.

Second, the shifting or adjustable socket attachment of the beam to the sheath, in combination with the dovetail and adjustable connection of the rear end of the beam to the helve, or equivalent devices, so as to vary the direction of the draught of the plow, to suit the requirement of a change in the flare of the mould board and other objects, as explained.

CORN HUSKING MACHINE.—By T. C. Hargreaves, of Schenectady, N. Y.: I claim, first, the application of the chisel or chisels, and cutter or cutters, in combination with the gate or gates, operated by gearing or other means, as described.

Second, I claim the construction of the circular plate or its equivalent, as described, in combination with the cutters for severing the cob, and the elbow lever for discharging the husks, as set forth.

Third, I claim the combination of a cam, lever, and spring, with a stud for holding the circular plate stationary whilst removing the ear and husk from the machine, or any other equivalent, as specified.

MACHINES FOR PARING APPLES.—By E. L. Pratt, of Worcester, Mass., (assignor to James Sargent & D. P. Foster, of Shelburn, Mass.): I claim hanging or connecting the block which carries the knife to the rod, which carries said block, so that the block and knife can vibrate and accommodate itself to any irregularity in the surface of the apple or vegetable pared, as described.

SEED PLANTERS.—By N. C. Davis, of West Jefferson, O.: I claim the piston provided with a notch or hollow, in its upper end, and so arranged in combination with the partition, and depression, that it will bring up and discharge through the aperture, the desired number of grains of corn every time it is raised by the operator, as set forth.

WINNERS.—By David S. Mackey & J. R. Smith, of Batavia, N. Y.: We claim, first, the peculiar manner of operating the screen, viz: by means of the eccentrics placed in a reverse manner upon the shaft, said eccentrics working between the blocks attached to the under side of the screen, as described.

Second, we claim producing two blasts from a single fan, and having the two blasts cross or intersect each other, by which a blast passes horizontally over the top of the screen, and a blast also passes upward through the screen, preventing the screen from being clogged or choked by the chaff.

ATTACHING HORSES TO PLOWS.—By John D. Filkins & W. H. De Puy, of Lima, Ind.: We claim the combination of the limber and stiff tongues with the running gear, to adapt it to being drawn by two teams abreast, as described.

CUTTING AND PLANTING POTATOES.—By Samuel Hutchinson, of Rockport, Indiana: I claim the construction and combination described, of the cam, sliding platform, cutting blade, and trap doors, with the furrowing share and covering blade, for cutting, dropping, distancing, and covering potatoes.

PLOW BEAMS.—By L. B. Griffith, of Honeybrook, Pa.: I claim constructing a plow beam of four

round iron rods, centre piece and clamps, in combination, as described, the rods being of uniform size, from end to end curved to the shape specified and welded together at the places designated, the center-piece and rods being held firmly in their position by the clamps, as described.

Fowler's Improved Draining Plow.

Inquiries having frequently been made as to the operation of the plow for laying tiles, now used in England, and which is worked by steam or horse power, we have procured a cut of the machine as it appears in operation. The description of it accompanying the cut is taken from the Transactions of the N. Y. State Agricultural Society for 1851.



It is stated to execute any drainage above four feet deep, at less than half the cost of the present system, and without disturbing the surface soil. In commencing the work, the plow is taken to one end of the field, and to the other the capstan, off the drum of which is run a wire rope attached to the plow. The plug and couler are then dropped into a hole prepared for them, and the drain pipes are threaded upon a rope attached to the back of the plug; when the horses attached to the levers of the capstan, by walking around, wind the wire rope on the drum and pull the pipe forward with the drain pipes, which are thus laid, when the soil is suitable, free from stone, more accurately than by hand. It has been in operation for a few years, and the improvements which have been made, as exhibited in the one on trial seemed to promise its practical adaptation for that country. It is thus referred

to in the report in this class: "But for the American reapers, Mr. Fowler's draining plow would have formed the most remarkable feature in the Agricultural department of the Exhibition. Wonderful as it is, to see the standing wheat shorn levelly low by a pair of horses walking along its edge, it is hardly, if at all, less wonderful nor did it excite less interest or surprise, among the crowd of spectators, when the trial was made at this place, to see two horses at work by the side of a field, on a capstan, which, by an invisible wire rope, draws towards itself a low frame-work, leaving but the trace of a narrow slit on the surface. If you pass, however, to the other side of the field, which the frame-work has quitted, you perceive that it has been dragging after it a string of pipes, which, still following the plow's snout, that burrows all the while four feet below ground, twists itself like a gigantic red worm into the earth, so that in a few minutes, when the frame-work has reached the capstan, the string is withdrawn from the neck, and you are assured that a drain has thus been invisibly formed under your feet." The Jury decided as follows:

The implement went through the trial very well, laying in the tiles with great apparent ease, worked by two horses, with a capstan which was firmly and easily fixed into the ground, and afforded a firm traction to the plow by means of a wire rope and pulley. Progress has been made, since the implement was exhibited at Exeter, in rendering the level of the drains in a degree independent of the level of the surface, "but there is still room for further improvement in giving to the drain an uniform incline." The award, therefore, of the Jury was Honorable Mention.

Broom Corn.

Mr. JOHNSTONE:—I saw in the last number of the *Farmer*, a statement of the profits of a crop of broom-corn by A. S. Chapman, with a yield of seed of thirty-three bushels to the acre. I raised this year a piece of forty-eight rods of ground. After cleaning off the seed, I had so large a pile I thought I would measure it. I had twenty-five bushels rounding measure; a little over a half bushel to the square rod, or about eighty-five bushels to the acre. I need not say the land was rich to produce such a crop; but it was not cultivated as it should have been. It was planted in drills, and the cultivator passed through it once, and then I went through with a hoe and thinned it out, but it was left too thick, so that there were many small heads.

The seed is excellent to feed sheep and lambs, and poultry, whole; but for all other feeding it should be ground. It is heavier than oats, and I think worth more per bushel when ground.

Respectfully, C. A. CHIPMAN.

Avon, Oakland county, Nov. 2, 1853.

CUT HAY TO MILCH COWS.—In a communication to the Worcester county, Massachusetts, Agricultural Society, Mr. W. S. Lincoln remarks:

"My milking stock consisted of one cow which came in on the 29th of October, the two trial cows and the other, which calved last April, and is expect-

ted to calve again the 1st of next April. Some time before commencing this experiment, I was feeding my stock—what would be called poor stock—with hay, with an allowance of roots. I commenced cutting this hay for all my stock, young and old, (16 head,) occupying me 1½ hours daily. Almost simultaneous with feeding the cut hay was a *increase* of milk very perceptible as it was milked in the pail. An inquiry was made by my wife, who in person takes charge of the dairy, as to the cause of this increase. An evasive reply was made. From day to day the milk increased enough for the substitution of six quart for four quart pans, which had been previously used. I think I am within bounds in saying that the increase was over a pint daily, per cow, occasioned, to the best of my knowledge, solely by the use of cut hay."

AGENTS FOR THE "FARMER."—Mr. S. B. Noble has appointed the following agents to obtain subscriptions for the *Farmer*:—At Albion, E. H. JOHNSON; at Coldwater, J. O. PELTON; at South Bend, W. H. LOOMIS; at Dowagiac, JUSTUS GAGE.

23 An Ohio Farmer says, that gapes in chickens is caused by lice getting into their mouths and turning to worms. He recommends putting fine tobacco in the nests about a week before the chickens are hatched, to drive off the lice.

Another hen fancier says that onions chopped fine and fed to chickens two or three times a week will be found a preventive and remedy for gapes, inflammation of the throat, eyes and head, and indeed of nearly all the diseases poultry "is heir to." Mix onions with their winter food to keep them healthy.

CORN STALK HARVESTER.—The *Richmond Enquirer* thus describes the model of a machine for harvesting corn stalks:

"Between two wheels there is an axle, to each end of which is attached a knife for cutting each row of corn. To the axle is also attached shafts for the horse which pulls the machine. The horse walks between the rows of corn, and the knife just on the inside of each wheel cuts the corn, which falls on a bed or place to catch it, in a manner resembling the operations of a wheat reaper. The bed which catches the corn, opens to the centre at the pleasure of the operator to discharge the corn in bundles. We are informed that with one man and a horse, the machine will cut 20 acres of corn a day. It is the invention of a citizen of Illinois."

ISHAM'S MUD CABIN.—The sale of this work among the author's friends and acquaintances in this city and throughout the State has been unprecedentedly large. One of our most enterprising publishers informs us that he has sold a larger number since its publication than he did of *Uncle Tom's Cabin* in the same time. Several reviews of the book have appeared in the periodicals. The correctness of the observations made by the author are admitted, and it is allowed that he has trodden a path which other travelers have left unexplored. The Messrs. Appleton have calls for the book from all quarters of the country.—*Detroit Adv.*

The Markets.

DETROIT, Nov. 30, 1853.

Beef cattle are rather lower than they were last month. Good fair animals being worth only 2½ to 3c live weight, and from 3¼ to 4¼c in carcass. Tallow 8 cts. Hides 4c per pound.

SHEEP—Sheep in carcass is worth 3c per lb. Alive they bring from \$2¼ to \$3. Sheep are worth \$1 a piece. Very heavy ones a little more.

HOGS—Good first rate heavy hogs are bought at \$5. And the tendency on the market is downwards. Pork in New York is selling at \$13.50 per bbl for mess, being a decline of about 50 cents per barrel for the past week.

POULTRY—Prices are the same as last month, with no better supply. Chickens from 2s to 2s 6d; Turkeys 4s to 8s; Ducks 5s; Geese 2s 6d.

GAME—Scarce and high, and supply light.

BUTTER—The supply of good fresh butter is not large, and 23 to 25 cts is paid for roll. Good prime skink is worth 13 to 20 cts.

CHEESE—Very little country cheese offering. Supplies of grocers mostly laid in from Ohio at last months prices.

APPLES—Fair and good sized apples bring 4s to 4s 6d per bushel. Prime eating apples are worth \$2 per barrel.

POTATOES—Potatoes sell at 3s to 3s 6d per bushel.

HAY—Continues to be very high. Best quality \$18. Red top and clover \$15 to \$16. Marsh hay \$12 to \$13.

SALT—The price of salt is \$2.25 per bbl.

FLOUR—The breadstuff market is a little unsettled at present; and is waiting advice from the other side. The last advices seemed to give the opinion that there might be a decline, but this is as yet uncertain. The navigation is nearly closed, nearly all the freight vessels being laid up. Some lots are still sent forward by steamboat. The price here is \$5.87 to \$6. The New York quotations for good Michigan are \$6.87½ to \$7.

WHEAT—Wheat is not coming in here in any quantity. The price paid just now is \$1.25 per loads from wagons. The New York market still maintains its high range, and white Michigan is quoted at \$1.70 to \$1.75 in that market.

OATS—Sell here for 36 cents per bushel.

CORN—At 60 cents.

WOOL—Since the great Boston sale, the prices of wool have fallen off, and nothing is doing of any consequence.

Receipts.

Cash received for Michigan Farmer, from Nov. 2 to Nov. 30, 1853: O Holmes \$4, J W Carman \$1, E H Johnson \$10, Dr Bigelow \$5, A Lawrence 75 cts., E Watson \$1, E Andrus M D \$2, D Smith \$1, D Case \$1.50, M Donnelly \$1, D R Pinney \$1, S B Noble (General Agent) \$35, Wm Clark \$1, L Leggett \$1, W C Tilden \$1, Wm Free man \$1, Adv \$1, E Mather \$3, O Taylor \$3, H Beardalee \$3, L Dodge \$1, C V S Thorne \$1, L G Morris \$2, N R Holdridge \$1, R E Barstow \$2, A Slayton \$2.25, G W Armstrong \$5.75, J Spratt \$1.50, A L Sprague \$1, J Upton \$1, D R Mullett \$2, M J Spencer \$3, Jesse Sutton \$9, L S Crittenden \$3.20, E W Crane \$1, L H Jones \$1, J C Holmes \$12, E A Briggs \$2, C M Saxton \$2.50, Geo Butler \$2, E M Stickney \$5, R Perry \$4, G B Slocum \$3, A Mead \$2, H Warner \$1, G W Pinkham \$3, I F Barker 75 cts., W Dwight \$1, J Wilsey 75 cts.

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The Mud Cabin.

OPINIONS OF THE PRESS.

This is one of the books that John Bull should read—he should be made to see himself as others see him. The author relates his own experience of English life, and points out clearly, and for the most part, impartially, the evils resulting from the spirit and tendency of British institutions.—Boston Post.

It is a picture of the woes of the lower classes, the operatives and laborers, and is certainly well done. The writer has ably carried out his design.—Boston Traveller.

The writer's object is to show the miserable condition of the English working-classes or peasantry, and the superiority of our own. The book is full of interest, and will undoubtedly meet with a large sale.—Daily Wisconsin.

To understand English institutions in their effect upon the destiny of the human family, it needs but to peruse the "Mud Cabin." No traveler or observer could see more, think more accurately, or turn the lesson to a more practical account than the writer of this work.—Binghamton Republican.

A painfully interesting volume, called "The Mud Cabin," or the character and tendency of British institutions, as illustrated in their effect upon human character and destiny.—Savannah Georgian.

This work, in spite of its name, will be read with interest when once opened.—New Haven Courier.

It is for the most part ably written, and in its exposition of individual cases of hardship and wrong, is calculated to attract attention on both sides of the Atlantic.—Newark Daily Adv.

The author has evidently walked through England with a prying eye, and has been eager to detect all that is evil in her social system.—Portland Transcript.

No American can read this truthful and earnest volume without thanking God that he is an American, and that he is beyond the reach of institutions which uphold a pampered aristocracy at the expense of the comforts, dignity and humanity of the great masses of the people.—Presbyterian.

Among the various topics treated in this interesting work, are the condition of the rural villages in England, English tenantry, the relations of the tenants with their landlords, the woes of Ireland, the power of the caste system, the economy of the British police, the state of the coal districts, pictures of the upper classes, and the future destiny of the people.—Lowell Courier.

We have read the book with a good deal of interest. Mr Isham's task has been a laborious one, and, we opine, anything but pleasant. But he has performed it fairly, impartially and impressively. Some of his episodes possess great beauty. He will be succeeded at, perhaps, by imported cocknies; but he will have the good sense to regard it as a compliment. The Mud Cabin will stand in spite of them.—Buff. Express.

His vivid description will win the attention of every thoughtful mind.—Harper's Magazine.

This is no catch penny publication.—New York Observer.

Mr. Isham is a man of shrewd sense, keen observation and strong democratic feelings. He appears to be conscientious and a sincere friend of the working classes. It is quite possible that English people may think him prejudiced and unjust, but it were well if they read his book carefully, and with a disposition to profit by the important truths it contains.—National Era.

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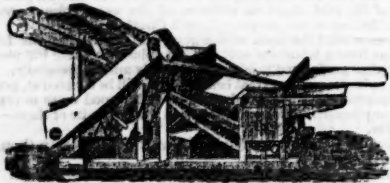
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